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# Democratic and Popular Republic of Algeria Public Expenditure Review of the Social Sector

(In Two Volumes) Volume II: Annexes

January 2002

Human Development Sector (MNSHD)  
Middle East and North Africa Re

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## CURRENCY EQUIVALENTS

Currency Unit = Algerian Dinar

US\$1 = DZD 77.06

## FISCAL YEAR

January 1 – December 31

## ABBREVIATIONS AND ACRONYMS

ADS	<i>Agence de Développement Social</i>
AFS	<i>Allocation Forfaitaire de Solidarité</i>
ALMP	Active labor market programs
ALOS	Average length of stay
ANEM	<i>Agence Nationale de l'Emploi</i>
ANSEJ	<i>Agence Nationale de Soutien à l'Emploi des Jeunes</i>
APSI	<i>Accord pour la Promotion et Soutien de l'Investissement</i>
CASNOS	<i>Caisse d'Assurance Sociale des Non-salariés</i>
CHU	<i>Centre Hospitalier Universitaire</i>
CNAC	<i>Centre Nationale d'Assurance Chômage</i>
CNAS	<i>Caisse Nationale d'Assurance Sociale</i>
CNR	<i>Caisse Nationale de Retraite</i>
COD	<i>Contribution d'Obtention de Droits</i>
CPE	<i>Contrats pré-emploi</i>
DA	Algerian dinar
EHS	<i>Etablissements Hospitaliers Universitaires</i>
ESIL	<i>Emploi Salarié d'Initiative Locale</i>
FNAC	<i>Fonds National de Développement et d'Apprentissage de la Formation Continue</i>
FY	Fiscal year
GDP	Gross domestic product
GNP	Gross national product
GOA	Government of Algeria
IAIG	<i>Indemnités pour Activités d'Intérêt Général</i>
IMR	Infant Mortality Rate
MENA	Middle East and North Africa
MMR	Maternal Mortality Rate
MOHP	Ministry of Health and Population
MOF	Ministry of Finance
MTPSFP	Ministry of Labor, Family Social Protection and Population
MVT	Ministry of Vocational Training
NGO	Non-governmental organization
NHA	National Health Account
OECD	Organization for Economic Co-operation and Development
PPP	Purchase power parity
SP	Social protection
TUP-HIMO	<i>Travaux d'Utilité Publique à Haute Intensité de Main-d'œuvre</i>
USAID	United States Agency for International Development
VET	Vocational Education and Training
VT	Vocational Training

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### Democratic and Popular Republic of Algeria Public Expenditure Review of the Social Sectors

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# ANNEX I: IMPROVING EFFICIENCY AND EQUITY IN THE EDUCATION SECTOR

## A. OVERVIEW AND INSTITUTIONAL FRAMEWORK

1. *The institutional organization of the education sector is characterized by the concentration of management, provision and financing functions in public hands.* The education system in Algeria comprises three levels: basic education (9 years), secondary education (3 years), and tertiary education<sup>1</sup>. In addition, there is a vocational training branch that is accessible to students who have completed the second cycle of basic education. Operations are mainly financed from the central budget and managed by three ministries: (i) the Ministry of National Education, in charge of basic and secondary education; (ii) the Ministry of Higher Education and Scientific Research Training, in charge of specialized institutes, university centers and universities; and (iii) the Ministry of Vocational Training.

2. *This system has made remarkable contributions to improve education outcomes during the last four decades.* While taking over the management and financing of the education system, the Government made education mandatory until the age of 16 and guaranteed access to basic education. During the 1960s, this involved massive investments in infrastructure (up to 25 percent of the Government's investment budget was allocated to the education sector compared to 15 percent today) and human capital formation. Hence, between 1962 and 1990, each year an average of 3,300 new classrooms were constructed and 4,500 new teachers entered the system<sup>2</sup>. This rapid expansion of infrastructure and human capital increased enrollment rates in primary education from less than 45 percent during the 1960s to about to 95 percent today. In addition, gender disparities were reduced, as the share of girls enrolled in basic education increased from 36 percent in 1962 to 46 percent today. As a result, adult illiteracy rates have fallen from 61 percent to 44 percent among females and from 32 percent to 22 percent among males.

3. *Over time, however, given budgetary constraints and growing demands, teachers' wages have been reduced and non-wage inputs have become scarce, thus affecting quality and reducing the internal efficiency of the system.* Algeria has traditionally spent more on education than other countries at the same level of economic development, without seeing better results (Figure 1). As expenditures per student fell over the last decade, dropout and repetition rates increased. To date, these rates are high, particularly at the end of the second and third cycles of basic education and at the end of secondary education (Figure 2). From 100 students entering the first cycle, only 12 will obtain the *Baccalauréat* (only one will achieve this without repeating grades). As a consequence, while 95 percent of students reach 5<sup>th</sup> grade, only 52 percent progress to 9<sup>th</sup> grade, and from these only 70 percent to secondary education (compared to an average of 80 percent in the Middle East and North Africa region)<sup>3</sup>. To date, half a million students drop out of school every year (7 percent of students) and one third join vocational training programs. This number puts untenable pressure on vocational training programs. The majority

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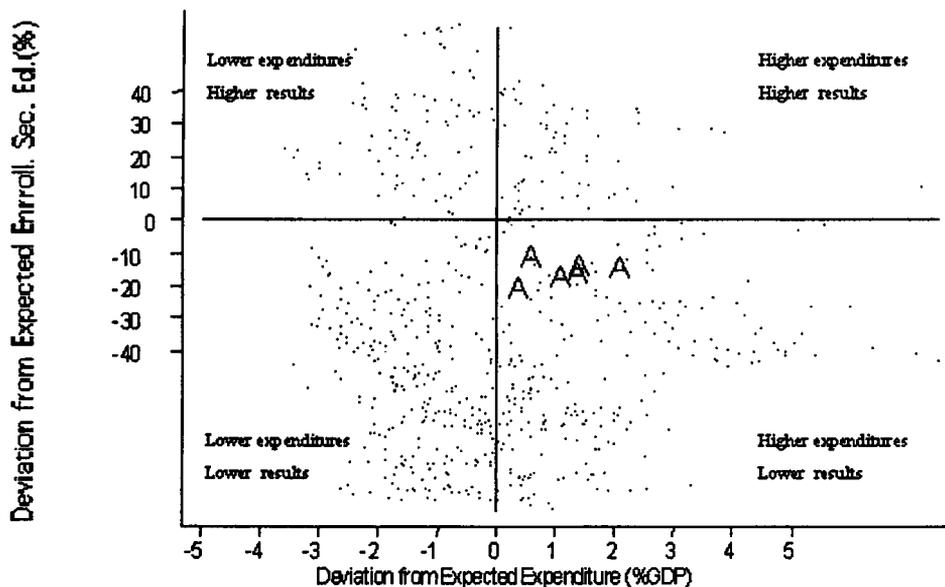
<sup>1</sup> Basic education consists of three cycles (3 years each). The first two cycles correspond to primary education and the third cycle is the so called complementary education. At the end of the third cycle, students can obtain the Certificate of Basic Education (Brevet d'Enseignement Fondamental), but this is not mandatory to enter secondary education (acceptance in secondary education is based on the average grade of the student). At the end of secondary education, students take exams to obtain the General Secondary Education Certificate (Baccalauréat), which is mandatory to enroll in specialized institutes, teachers training institutes, or universities.

<sup>2</sup> Today, Algeria counts 271,800 teachers in basic education, 61,200 teachers in secondary education, 17,760 teachers in tertiary education, and 12,180 teachers in vocational training. There are close to 19,000 schools, 1,259 high-schools (lycées), 793 vocational training institutes, and 52 centers for tertiary education including 18 universities, 15 university centers, and one center for continuous education.

<sup>3</sup> Similarly, the average repetition rate in Algeria during the first two cycles of basic education is 13% (compared to an average of 9% in the Middle East and North Africa region and 6% in Middle East oil producing countries) and 18% in secondary education (compared to 10.5% in Middle East oil producing countries).

of students who graduate from high-school attend university so that the number of students enrolled in higher education has been growing at an average of 11 percent per year. Today, university capacity is utilized at 130 percent<sup>4</sup> and budgetary demands are unsustainable.

**Figure 1: Expenditures in education have been high given Algeria's level of income, but have not generated proportionally better outcomes**



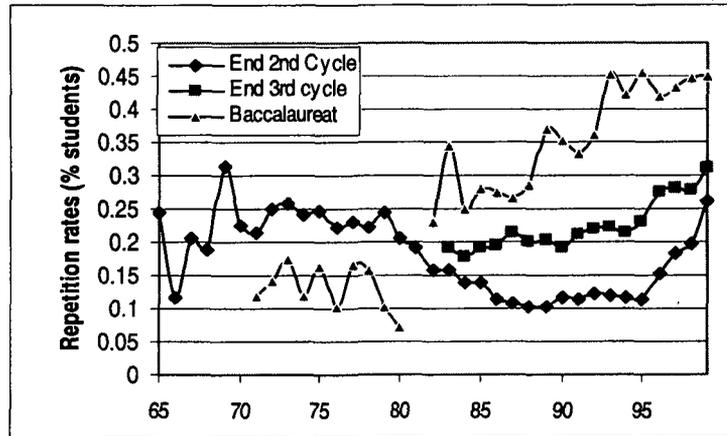
Source: Author's calculations using data from the World Development Indicators database. Dots represent countries observed at different points in time from 1980-1999. The "As" refer to Algeria. The graph shows that Algeria has spent more on education than expected given its level of income. At the same time, outcomes in terms of enrollment in secondary education have not been as good as expected given this level of income (similar results are obtained for indicators such as illiteracy rates).

4. *In May 2000, the Government appointed a National Commission to explore reform alternatives that would strengthen and expand the education system while ensuring that it is financially sustainable. A final report from the Commission is currently underway. In the meantime, the Government with assistance from the World Bank, has outlined the major lines of the strategy for the education sector<sup>5</sup>; these include: (i) addressing inequality problems by reviewing the current mechanisms used to allocate resources across wilayas and improving targeting in the distribution of subsidies; (ii) improving the internal efficiency of the system by reducing repetition and dropout rates in basic and secondary education; (iii) freeing resources to repair infrastructure; (iv) improving quality by reviewing the current curricula, ensuring adequate supply of textbooks and teaching materials, and introducing continuous training programs for teachers; (v) exploiting information technologies to facilitate learning and reduce infrastructure constraints; and (vi) encouraging the private sector to take on a more active role in education, both in terms of financing and in terms of the provision of education services.*

<sup>4</sup> Capacity is designed to receive 395,000 students currently there are over 470,000.

<sup>5</sup> In November 2000, the Government endorsed the Education Sector Strategy Note prepared jointly with the World Bank.

**Figure 2: Repetition rates have increased sharply**



Source: Statistics Ministry of National Education

5. This review helps to set priorities in the implementation of the Government's strategy while evaluating the major short-term budgetary implications. Clearly, the objectives put forward are ambitious and are likely to demand considerable resources. To accommodate these objectives in the context of a sustainable fiscal framework, interventions to improve efficiency will be required. This review identifies some of these interventions and assesses their fiscal impact. The analysis is developed into four sections: section B identifies major efficiency problems while section C discusses equity and effectiveness issues. Section D presents policy recommendations by education level and Section E summarizes their budgetary implications.

## B. EFFICIENCY IN EDUCATION FINANCING AND EXPENDITURES

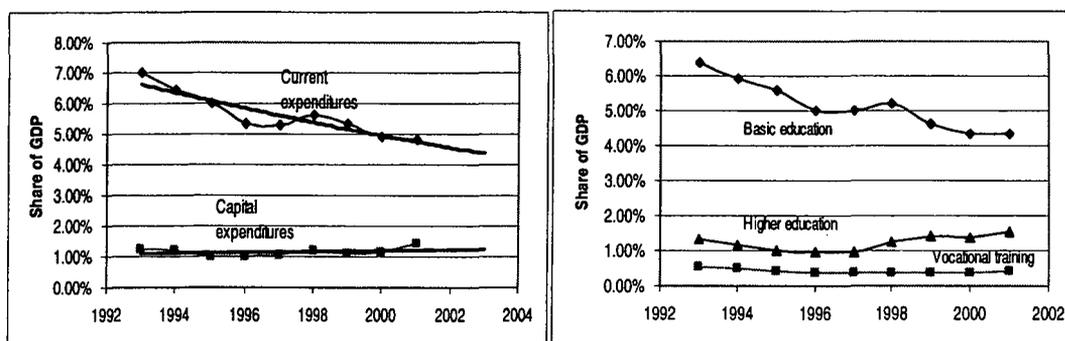
### B.1 Major Trends in the Level and Functional Composition of Education Expenditures

6. Public expenditures in the education sector currently approximate 6 percent of GDP, a sharp decline from expenditure levels in the 1970s and 1980s (about 11 percent of GDP) and early 1990s (8 percent of GDP)<sup>6</sup>. During the last decade, the share of GDP allocated to the education sector has been declining by half a percentage point per year. Reductions have mostly affected current expenditures, while capital expenditures have remained roughly constant at 1 percent of GDP (Figure 3). Nonetheless, the overall level of education expenditures remains in line with international levels.

7. Reductions in the education budget have mostly affected current expenditures in basic and secondary education while the share of expenditures in higher education has increased, reflecting higher enrollment. Between 1993 and 2000, the budget for basic and secondary education was reduced from 6.4 percent to 4.3 percent of GDP. This was achieved mainly by cutting the share of current expenditures from 5 percent to 3.6 percent of GDP. In the meantime, the share of expenditures in vocational training remained roughly constant at 0.4 percent of GDP, while expenditures in tertiary education increased slightly from 1 to 1.5 percent of GDP.

<sup>6</sup> These numbers do not take into account current expenditures in primary education (teacher remunerations excluded) that take place at the local level. The central budget is responsible for teacher wages, while operating expenses and wages of administrative staff are covered at the local level. The exact level of these expenditures remains unknown. Assuming an average number of 2 administrative staff per school, and an average wage of close to DA 106,000, these expenditures are likely to approximate 5% of the observed current budget.

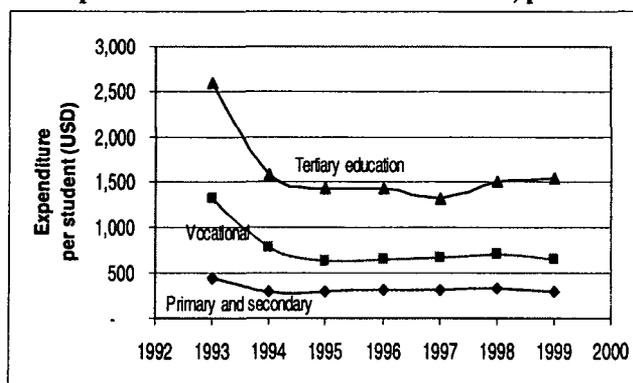
**Figure 3: Current expenditures as a share of GDP have fallen, particularly in the case of basic and secondary education**



Source: Author's calculations

8. *Budget cuts, together with increased enrollments, resulted in sharp reductions in real expenditures per student at all levels.* During the last decade, expenditures per student in basic and secondary education have been reduced by 20 percent in real terms. In the case of higher education, reductions are close to 30 percent, while for vocational training they reach 40 percent. As discussed below, despite recent reductions, current expenditures per student remain in line with international averages.

**Figure 4: Expenditures per student have decreased at all levels, particularly in higher-education**



Source: Author's calculations, based on statistics from the Ministry of National Education

9. *Algeria spends US\$760 (PPP adjusted) per student per year in basic and secondary education, a relatively high amount given the country's level of income.* Basic and secondary education account for 4.3 percent of GDP, which is roughly equivalent to an expenditure of US\$290 per student per year (Figure 4) or US\$760 after adjusting for differences in purchasing power. This is the level of expenditures observed in countries with a GDP per capita (PPP adjusted) between US\$5,000 and US\$10,000 (Algeria has a PPP adjusted GDP per capita of US\$4,904). As an additional reference, expenditures per student in primary and secondary education in the Middle East and North Africa region are close to 15 percent of GNP per capita, while in Algeria they represent 19 percent.

10. *Expenditures per student per year in higher education are close to US\$4,000 (PPP adjusted), this is high by international comparison.* While tertiary education accounts for only 20 percent of total expenditures in education, the expenditure per student is five times higher than in basic and secondary

education. Again, this level of expenditures corresponds to countries with a GDP per capita between US\$5,000 and US\$10,000. Algeria's expenditures per student are equal to its GNP per capita while expenditures per student in the Middle East and North Africa region represent, on average, 80 percent of GNP per capita.

11. *While vocational education and training (VET) expenditures per student are not particularly large when compared to other middle income countries (close to US\$1,730, PPP adjusted), issues have been raised in terms of their effectiveness.* Per capita costs for vocational training programs vary widely across countries at the same level of income, and comparisons are, therefore, of little use. Nonetheless, the recent Multi-Country Study of Vocational Education and Training Reforms shows that in general Governments tend to overspend in VET. Usually, public expenditures per student are two to three times higher than expenditures in basic and secondary education, yet the effectiveness of these programs to incorporate students into the labor market is still contested<sup>7</sup>.

## **B.2 Economic Composition of Education Expenditures**

12. *In the case of basic and secondary education, the composition of expenditures reveals excessive allocations to wages and administrative functions and very low designations for maintenance, services and materials.* Eighty percent of the total budget for basic and secondary education is allocated to current expenditures. From these, close to 90 percent are expenditures related to personnel<sup>8</sup>, of which 50 percent constitute wages. Thirty percent of these wages correspond to administrative staff. In FY2000, the remaining 10 percent of current expenditures were allocated to subsidies for autonomous teaching institutions, which are used mainly in food related expenditures, and to public interventions which include the provision of fellowships and services, materials and maintenance. The budget for maintenance and materials in school is close to 4 percent of total current expenditures, which is very low by international standards.

13. *The share of administrative wages in total wages paid is particularly high in the case of secondary education, due to a high number of administrative staff per teacher.* Forty percent of wages paid in secondary education correspond to administrative staff (compared to 20 percent in basic education), despite the fact that the average wage for teachers in secondary education is 40 percent higher than the wage of administrative staff (compared to 20 percent in the case of basic education). The reason is a high ratio of administrative staff relative to teachers. Indeed, today there are close to nine administrative staff per ten teachers. This ratio has been increasing rapidly since 1990, when the system had five administrative staff per ten teachers.

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<sup>7</sup> See "Skills and Change: Constraints and Innovation in the Reform of Vocational Education and Training". Edited by Indermit Gill and Fred Fluitman. World Bank, 2000.

<sup>8</sup> A study by the Ministry of Finance, *Note Relative aux Secteurs de l'Education Nationale et de la Formation Professionnelle*, raises issues relative to the system used to pay wages. This system involves 4,600 payment centers operating within certain teaching institutions in different regions. Each of these centers has its own account with the Treasury which are accumulating arrears. It seems that teaching institutions are hiring teachers outside of the budget. Indeed, the number of teachers reported by the Ministry of National Education is higher than the number of teachers registered in the budget.

**Table 1: Structure of Education Expenditures in Algeria (DA 000,000)**

	DA Million				Shares			
	1998	1999	2000	2001	1998	1999	2000	2001
<b>TOTAL</b>	<b>190,405</b>	<b>204,949</b>	<b>225,512</b>	<b>246,205</b>				
<b>Education Fond. &amp; Sec.</b>	<b>145,164</b>	<b>147,943</b>	<b>161,240</b>	<b>169,814</b>	<b>76.2%</b>	<b>72.2%</b>	<b>71.5%</b>	<b>69.0%</b>
Current expenditures	124,315	127,320	135,820	137,414	85.6%	86.1%	84.2%	80.9%
Personnel	115,510	117,946	121,307	122,056	92.9%	92.6%	89.3%	88.8%
Materials and services	156	224	188	186	0.1%	0.2%	0.1%	0.1%
Maintenance	19	29	18	19	0.02%	0.02%	0.01%	0.01%
Subsidies to E.P.A	4,962	4,713	7,230	8,935	4.0%	3.7%	5.3%	6.5%
Other public initiatives	3,669	4,408	7,078	6,218	3.0%	3.5%	5.2%	4.5%
Capital expenditures	20,849	20,623	25,420	32,400	14.4%	13.9%	15.8%	19.1%
<b>Vocational training</b>	<b>10,849</b>	<b>11,937</b>	<b>13,668</b>	<b>16,194</b>	<b>5.7%</b>	<b>5.8%</b>	<b>6.1%</b>	<b>6.6%</b>
Current expenditures	6,815	7,424	8,068	9,132	62.8%	62.2%	59.0%	56.4%
Personnel	561	595	636	674	8.23%	8.02%	7.88%	7.38%
Materials and services	46	55	48	49	0.67%	0.75%	0.59%	0.54%
Maintenance	3	3	4	4	0.05%	0.04%	0.05%	0.04%
Subsidies to E.P.A	6,155	6,726	7,339	8,361	90.31%	90.59%	90.96%	91.56%
Other public initiatives	51	45	43	44	0.74%	0.61%	0.53%	0.48%
Capital expenditures	4,034	4,513	5,600	7,062	37.2%	37.8%	41.0%	43.6%
<b>Tertiary education</b>	<b>34,391</b>	<b>45,069</b>	<b>50,603</b>	<b>60,198</b>	<b>18.1%</b>	<b>22.0%</b>	<b>22.4%</b>	<b>24.5%</b>
Current expenditures	25,747	35,028	38,703	43,592	74.9%	77.7%	76.5%	72.4%
Personnel	131	135	166	161	0.51%	0.39%	0.43%	0.37%
Materials and services	35	37	42	790	0.14%	0.11%	0.11%	1.81%
Maintenance	4	4	6	8	0.02%	0.01%	0.01%	0.02%
Subsidies to E.P.A	24,478	29,217	32,852	37,000	95.07%	83.41%	84.88%	84.88%
University social expenditures	-	-	-	18,284	..	..	..	41.94%
Other public initiatives	1,099	5,634	5,637	5,633	4.27%	16.08%	14.57%	12.92%
Capital expenditures	8,644	10,041	11,900	16,606	25.1%	22.3%	23.5%	27.6%

Source: Ministry of Finance, Ministry of National Education for Basic and Secondary Education year 2000, and Ministry of Higher Education for Higher Education year 2001.

**Table 2: Composition of University Social Expenditures (FY 2001)**

	DA 000,000	Share
Wages	3,835	20.5%
Materials and maintenance	1,707	9.1%
Various activities	173	0.9%
Fellowships	4,300	22.9%
Food	7,280	38.8%
Transport	1,450	7.7%
<b>Total</b>	<b>18,745</b>	

Source: Ministry of Higher Education

14. *In the case of higher education, the major imbalance is between operational expenses and expenditures for fellowships, and food, housing and transport subsidies that account for 40 percent of the current budget.* Current expenditures represent close to 70 percent of the higher education budget. At the central and local levels, expenditures in personnel (0.4 percent of total) and services and maintenance (2 percent of the total) are very modest. The majority of the budget (85 percent) is directly allocated to autonomous teaching institutions (mostly universities). This share was 95 percent in 1998, but decreased in favor of the category “other public initiatives” due to the creation in 1999 of the National Fund for Scientific Research and Technology Development (*Fond National de la Recherche Scientifique et du Développement Technologique*). From this 85 percent of the budget, almost half is used to finance operations (e.g., wages, services and materials). The remaining 50 percent, however, concentrates on university social expenditures (the so-called *Oeuvres Universitaires*). These account for over 40 percent of total current expenditures and are allocated to fellowships (23 percent), the provision of food (40 percent) and transport subsidies (7 percent). The operating expenditures of the *Office National des Oeuvres Universitaires*, including housing facilities, accounts for 30 percent of the total allocation. These subsidies benefit the majority of students and impose important pressures on the budget (see paragraph 28).

15. *In terms of the budget for VET, problems are linked to high investment expenditures (an average of 40 percent of the budget between 1998 and 2001), and excessive expenditures in wages (86 percent of the budget of the training centers).* Vocational Training has been traditionally a capital-intensive activity due to requirements in terms of equipment. The strategy of replicating industrial settings within training centers has led to high average costs per student. In Algeria, the cost of building a training center with capacity for 300 students approximates DA 110 million (US\$1.4 million). This is equivalent to an investment cost per student of DA 366,000, compared to DA 45,600 in primary education, DA 92,800 in the third cycle of basic education, and DA 118,000 in the case of secondary education. Thus, capital expenditures have consumed a considerable share of the budget that could have been saved, for instance, through training partnerships with the private sector. In terms of the current budget, 92 percent is directly allocated to teaching centers. The bulk of these allocations (86 percent) are for wages and only 7 percent finance maintenance and services. The remaining 7 percent are used to finance fellowships and the salaries of part of the students enrolled in in-service training programs.

### **B.3 Impact of Expenditure Cuts on Efficiency and Quality**

16. *Budget cuts have been accommodated by a combination of improvements in efficiency and reductions in quality.* A mechanism to evaluate how quality and efficiency have contributed to costs reductions is to decompose the growth rate of expenditures per student into the growth rate of its different determinants. Our analysis shows that responses vary by education level.

17. *In basic and secondary education the reduction in expenditures per student observed between 1990 and 2000 was mainly absorbed by a decline in teachers real wages, while efficiency gains played a secondary role.* Eighty percent of the fall in expenditures per student can be explained by lower real wages for teachers (Table 3). Adjustments were particularly important in primary education and secondary education where teachers’ real wages declined by over 40 percent. Another mechanism to absorb budget cuts was to reduce expenditures per student in the categories of subsidies and public interventions (these explain 10 percent of the reduction in expenditures per student). During the same period, some efficiency gains were observed in reducing the teachers/students ratio (particularly in complementary education), but these were neutralized by an increase in the ratio of administrative

staff/student at all levels<sup>9</sup>. Efficiency gains also resulted from a reduction in the size of the central and local administrations, but their weight was marginal.

18. *In higher education the reduction in expenditure per student was in part absorbed by higher student/teacher ratios and lower wages; in vocational training lower investments per student played also a key role.* Data are not available to analyze changes in efficiency and quality in higher education and vocational training. Nonetheless, there is evidence that as in the case of basic and secondary education, lower real wages account for much of the fall in expenditures per student. In higher education, higher student/teacher ratios also contributed to lower expenditures. For instance, between 1996 and 2000, the student/teacher ratio increased by 32 percent. In vocational training, due to lack of data, it is unclear how the student/teacher ratio has evolved. However, available data show that lower expenditures were in part financed through lower investment. Capital expenditures per student decreased by 42 percent in real terms between 1993 and 2000.

**Table 3: In basic and secondary education, reductions in expenditures per student are explained by reductions in teachers' real wages**

Price index	1 4.78		% Change	Contribution
	1990	2000		
<b>Teachers per student</b>	0.045	0.043	-2.6%	5.0%
Primary	0.036	0.035	-2.5%	
Complementary	0.058	0.053	-8.1%	
Secondary	0.066	0.066	0.6%	
<b>Wage per teacher (real terms)</b>	49,568	28,825	-41.8%	81.3%
Primary	49,511	27,974	-43.5%	
Complementary	48,264	30,141	-37.6%	
Secondary	52,300	30,592	-41.5%	
<b>Administrative staff per student</b>	0.018	0.021	20.3%	-3.4%
Primary	0.006	0.006	0.0%	
Complementary	0.038	0.044	15.1%	
Secondary	0.042	0.053	28.1%	
<b>Wage per administrative staff (real terms)</b>	10,762	8,490	-21.1%	3.6%
Primary	1	1		
Complementary	31,380	23,928	-23.7%	
Secondary	31,293	21,342	-31.8%	
<b>Staff at the central level per student</b>	0.00014	0.00008	-41.1%	0.3%
<b>Wage staff at the central level (real terms)</b>	66,079	26,200	-60.4%	0.5%
<b>Operations subsidies per student</b>	252.8	143.1	-43.4%	9.6%
<b>"Public initiatives" per student</b>	95.9	94.4	-1.6%	0.1%
<b>Maintenance expenditures per student</b>	172.3	139.0	-19.3%	2.9%
<b>Expenditure per student (real terms)</b>	2,933.89	1,814.02	-38.17%	100%

Source: Author's calculations on the basis of budgets 1999 and 2000

Note: The number of teachers and administrative staff from the budget is not consistent with the numbers reported in the Statistical Report of the Ministry of National Education

<sup>9</sup> Government officials have explained that the majority of new administrative staff constitute security personnel.

19. *Current teacher wages are low by international standards, thus contributing to reduced motivation and quality of teaching staff.* As previously discussed, teacher wages have been more than halved in real terms during the last decade. Today, the average wages for teachers in basic and secondary education are equivalent to 1.02 and 1.08 times per capita GDP respectively. These ratios seem low by international standards (Table 4), particularly taking into account that teachers in Algeria have, on average, a higher number of weekly hours devoted to teaching than observed in other countries (30 hours vs. an average of 25 hours in the Middle East, Africa, North and South America, Western Europe and East Asia regions, and an average of 20 hours in Central Europe and the former Soviet Union).

20. *Falling teachers' real wages and depressed expenditures in services and materials are likely to have had negative impacts on quality.* Several studies have raised the problems of low levels of training among teachers, as well as fading morale. The problem is particularly critical in the case of basic education, where 85 percent of teachers in the first and second cycles, and 63 percent of the teachers in the third cycle have not obtained the *Baccalauréat*. The 20 percent reduction in maintenance and services expenditures per student observed between 1990 and 2000 may have also reduced quality. Today, expenditures on services and materials represent 3.8 percent of total current expenditures. From these, however, only 5 percent are directly related to materials and maintenance services. While data are not available for a detailed analysis of these issues in vocational training and higher education, similar problems are likely to be found.

**Table 4: Teachers' wages are low by international comparisons**

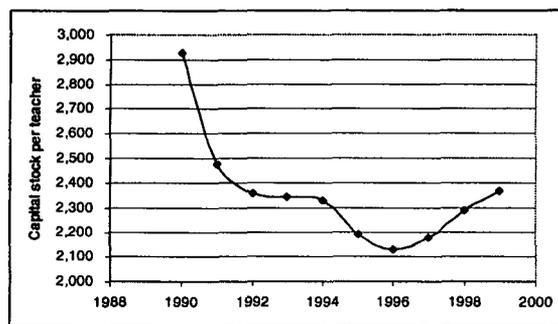
	Primary education		Secondary education	
	Average teacher salary/GDP per capita	Maximum potential additional bonus(%)	Average teacher salary/GDP per capita	Maximum potential additional bonus(%)
<b>Algeria</b>	1.02 ( <i>basic ed.</i> )		1.08	
<b>Argentina</b>	0.88	8.22	1.48	7.15
<b>Brazil</b>	1.37		1.74	
<b>Chile</b>	1.28	43.9	1.33	44.60
<b>Indonesia</b>	1.44	18.13	1.63	17.21
<b>Jordan</b>	4.42		4.42	
<b>Malaysia</b>	1.35	7.12	2.44	7.24
<b>Philippines</b>	2.74	24.56	2.74	24.56
<b>Thailand</b>	3.24		3.24	
<b>Uruguay</b>	0.97	14.82	1.07	14.85
<b>OECD</b>	1.36		1.53	

Source: Algeria based author's calculations. Other countries based on OECD statistics.

21. *On the positive side, despite budget constraints, capital expenditures have been kept constant relative to GDP and in the case of basic and secondary education their current level appears appropriate to finance the expansion of future infrastructure needs.* After a rapid expansion during the second half of the 1980s, capital investments in basic and secondary education slowed down during the 1990s and appear to have picked up in the last couple of years. Several studies have pointed at low levels of capital expenditures in the education sector, particularly in basic and secondary education. A closer look at the dynamics of the net real stock of capital reveals, however, that it has been expanding since 1997 (Figure 5). This is not surprising given that during the 1990s an average of 450 schools/colleges were constructed each year. Preliminary calculations suggest that current levels of investment are adequate to absorb future entrants. Indeed, during the next five years, enrollment in basic and secondary education is expected to grow at close to 1 percent per year (in the absence of reforms) or close to 2 percent if dropout rates are

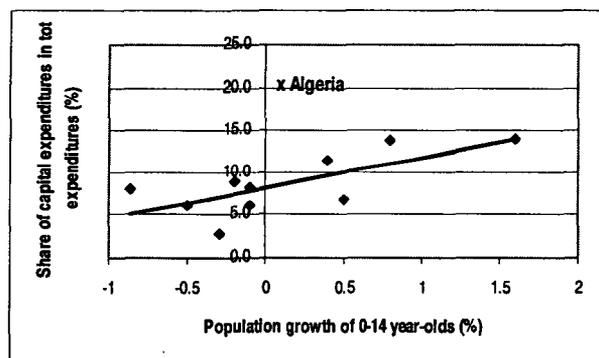
reduced<sup>10</sup>. Holding constant the current share of investment in total GDP, the objective of keeping the current average number of students per school (300 in the case of basic education and 700 in secondary education) can be achieved if the economy expands at least at the same rate as the population of students. This seems possible according to the latest macroeconomic projections (see Statistical Annex A). In the case of higher education, however, the share of investment expenditures would need to increase to respond to a fast expansion of the stock of students. On the contrary, investment expenditures in vocational training could be reduced through a better collaboration with the private sector (see section E).

**Figure 5: Net Stock of Real Capital accumulation dropped during the first half of the 1990s and picked up after 1996**



Source: Author's calculations using the perpetual inventory model

**Figure 6: Algeria capital expenditures in basic and secondary education comfortably meet international standards**



Source: Author's calculations. Dots represent countries observed during the period 1995-1998

## C. EQUITY AND EFFECTIVENESS OF PUBLIC EXPENDITURES IN EDUCATION

### C.1 Regional Inequalities

22. A look at various education indicators across the 48 wilayas reveals considerable regional inequalities. We draw attention to differences among three types of indicators: (i) promotion rates; (ii) student concentration indicators such as the number of students per class; and (iii) indicators of the level of public assistance such as the share of students who receive a fellowship. In terms of promotion rates,

<sup>10</sup> International statistics on education suggest that capital expenditures in primary and secondary education are proportional to the growth rate of the population of 0-14 year-olds. *Grosso-modo*, a 1 percentage point increase in the population growth rate is associated with a 3.6 percentage points increase in the share of capital expenditures. As shown in Figure 6, in the case of Algeria, the current 20% share meets comfortably this criterion.

the differences between the bottom quintile and the top quintile<sup>11</sup> range between 29 percent for the promotion rate from the second to the third cycle to 93 percent for the rate of success in the Baccalauréat (Table 5). These differences may be reflecting, in part, inequalities in terms of the quality of education across wilayas. In addition, there are sharp variations in terms of the number of students per teacher and the number of students per class. For instance, the top quintiles have between 50 and 55 percent more students per class than the bottom quintiles. Finally, in terms of public assistance, there is a large variation between the share of students receiving fellowships or food subsidies. In some wilayas, over 70 percent of students receive this type of assistance while in others very few do so. As discussed below, there are important correlations between these indicators.

23. *Wilayas with a high concentration of students are also likely to have better outcome indicators.* The average number of students per school (at all levels) appears to be *positively* correlated with quality indicators (Table 6). In particular, wilayas with a high concentration of students in high schools are also likely to have better promotion rates at all levels. Thus, a high concentration of students may indicate higher demand due to better quality. This is consistent with other studies' findings that schools in some urban areas (e.g., Alger) are now over crowded due to migration flows of individuals/families looking for better schools or better economic opportunities.

24. *Wilayas with a high proportion of students receiving full fellowships or food subsidies are also likely to display lower educational outcomes.* The share of students receiving public assistance is negatively correlated with indicators such as promotion rates (at all levels). One explanation for this correlation is that wilayas with a high proportion of students receiving public assistance are also likely to be wilayas with scarce resources, where infrastructure and quality of teaching are below average. At the same time, students are likely to face tighter budgetary constraints which increase their probability of dropping out (see paragraph 29).

25. *The policy to allocate expenditures across wilayas, however, seems to be prioritizing low-income regions with poor education indicators.* There is considerable variation in the distribution of expenditures by wilaya. While wilayas such as Illizi receive transfers for basic and secondary education equivalent to DA 33,260 per student per year, wilayas such as Bejaia receive only DA 2,300. However, in general, those wilayas receiving higher transfers per student are also likely to be either low-income wilayas or wilayas with poor education indicators (Table 2 and Figures 1-3).

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<sup>11</sup> These are quintiles of the distribution of the indicator, not income quintiles.

**Table 5: Education indicators by wilaya reveal considerable regional inequalities**

	Min	Max	Difference between the 1 <sup>st</sup> & 5 <sup>th</sup> quintiles of the indicator
<b>Quality indicators</b>			
<i>Promotion rate from 1<sup>st</sup> to 2<sup>nd</sup> grade</i>	79.8	92.4	9.8%
<i>Promotion rate from 6<sup>th</sup> to 7<sup>th</sup> grade</i>	53.6	77.5	28.9%
<i>Persistence to 6<sup>th</sup> grade</i>	76.4	94.5	17.1%
<i>Promotion rate end of 3<sup>rd</sup> cycle</i>	29.5	60.7	53.2%
<i>Baccalauréat promotion rate</i>	7.6	36.7	93.2%
<b>Concentration indicators</b>			
<i>Students per teacher (Arab)</i>	24.0	40.0	33.3%
<i>Students per teacher (French)</i>	72.0	137.0	44.5%
<i>Students per teachers (English)</i>	0.0	264.0	658.6%
<i>Students per class (1<sup>st</sup> &amp; 2<sup>nd</sup> cycles)</i>	22.0	53.0	55.8%
<i>Students per school (3<sup>rd</sup> cycle)</i>	277.0	769.0	63.3%
<i>Students per school (secondary)</i>	136.6	985.2	52.1%
<b>Gender equality</b>			
<i>Girls participation rate (1<sup>st</sup> &amp; 2<sup>nd</sup> cycles)</i>	40.8	48.0	4.8%
<i>Girls participation rate (3<sup>rd</sup> cycle)</i>	38.6	53.6	19.0%
<i>Girls participation rate (secondary)</i>	32.7	64.6	27.3%
<b>Public assistance</b>			
<i>Share of students with fellowships</i>	0.0	78.2	>1000%
<i>Share of students with 1/2 fellowships</i>	0.0	52.3	>1000%
<i>Share of students receiving food subsidies</i>	1.5	75.6	715.3%

Source: Author's calculations using Statistics from the Ministry of National Education

**Table 6: Concentration indicators are positively correlated with outcome indicators and gender equality, while public assistance is negatively correlated with both**

	Prom rate from 1 <sup>st</sup> to 2 <sup>nd</sup> grade	Prom rate from 6 <sup>th</sup> to 7 <sup>th</sup> grade	Persist. to year 6 <sup>th</sup>	Girls part. rate (1 <sup>st</sup> & 2 <sup>nd</sup> cycle)	Share students food subsidy	Prom. Rate end 3 <sup>rd</sup> cycle	Girls part. rate (3 <sup>rd</sup> cycle)	Share Student fellows	BAC prom. rate	Girls part rate (secondary)	Number of students per school
Promotion rate from 1 <sup>st</sup> to 2 <sup>nd</sup> grade	1	0.41	0.41	0.31	-0.58	0.05	0.42	-0.16	0.31	0.43	0.43
Promotion rate from 6 <sup>th</sup> to 7 <sup>th</sup> grade		1	0.37	0.30	-0.26	0.32	0.13	-0.21	0.28	0.12	0.33
Persistence to year 6 <sup>th</sup>			1	0.19	-0.11	0.04	0.41	0.03	-0.09	0.34	0.33
Girls participation rate				1	-0.25	0.20	0.57	-0.20	0.28	0.47	0.65
Share students receiving food subsidies					1	-0.23	-0.32	0.16	-0.54	-0.35	-0.43
Promotion rate end of 3 <sup>rd</sup> cycle						1	0.12	-0.15	0.45	-0.04	0.29
Girls participation rate							1.00	-0.05	0.20	0.87	0.34
Share students with fellowship								1	-0.39	-0.20	-0.27
Baccalauréat promotion rate									1	0.20	0.27
Girls participation rate										1	0.29
Number of students per school											1

Source: Author's calculations using statistics from the Ministry of National Education.

## C.2 Gender Inequality

26. While the gap between boys and girls participation rates has narrowed over time, it persists particularly among low-income individuals. Girls' participation rates range between 40 percent and 48 percent for the first and second cycles, 38 percent and 54 percent for the third cycle, and 32 percent and 64 percent for secondary education. These participation rates are positively correlated with quality indicators, such as promotion rates and students' concentration indicators, and negatively correlated with the share of students receiving some kind of public assistance (a proxy for the level of income of the

wilayas). Thus, wilayas with a high share of students receiving assistance also tend to be wilayas with low female participation rates. The problem of gender inequality among low-income groups was also identified by the 1999 Algeria Poverty Report. The report shows, for instance, that the female average enrollment rate in secondary education among households in the top quintile approximates 80 percent, but only 57 percent in the case of the bottom quintile. Thus, quality and gender problems seem to be different sides of the same coin: poverty.

### C.3 Education Subsidies and the Poor

27. *At the aggregate level, education subsidies are pro-poor, but on a per capita basis, high-income and low-income students receive similar levels of public assistance.* Results from the 1995 household survey in Algeria show that the bottom quintile in the income distribution receives 13 percent of total subsidies while the top quintile receives 5 percent (Table 7). This is mainly due to the fact that enrollment rates in primary education are relatively high, even among low-income households, and that primary and secondary school-age children represent a much larger fraction of the population in the poorest deciles. However, on a per capita basis, subsidies received by low-income students are similar to the subsidies received by high-income students. If we consider that the latter have access to schools with better infrastructure and quality of teaching, it could even be the case that subsidies among high-income students are higher than for low-income students. Hence, the fact remains that considerable public resources are used to subsidize education and related goods and services (e.g., learning materials, food and transportation) to households that have the means to purchase these goods and services.

**Table 7: At the aggregate level, education subsidies concentrate on the poor**

Income decile	Share of the subsidy in household's expenditures	Subsidy per Household (DA)	Share total subsidies	Expenditures in education as a share of total household expenditures
1	2.5	1,800	13.04%	4.8%
2	1.5	1,750	12.68%	4%
3	1.25	1,700	12.32%	3.8%
4	1	1,600	11.59%	3%
5	0.9	1,500	10.87%	2.7%
6	0.8	1,450	10.51%	2.5%
7	0.7	1,400	10.14%	2%
8	0.5	1,000	7.25%	1.8%
9	0.3	900	6.52%	1.6%
10	0.2	700	5.07%	1%

Source: Democratic and Popular Republic of Algeria: Growth, employment and poverty reduction (1999)

28. *The poor continue to face access problems, particularly to secondary education, which can be explained, in part, by relatively high out-of-pocket education expenditures.* While enrollment rates in the first and second cycles of basic education are relatively homogenous across income groups, considerable differences persist in terms of enrollment in secondary education. Enrollment rates among households in the top quintile approximate 77 percent for males and 80 percent for females, but only 72 percent and 57 percent, respectively, in the case of the bottom quintile. These differences can be explained, in part, by higher dropout rates, probably associated with liquidity constraints faced by low-income households. Indeed, poor households face out-of-pocket expenditures for books and other learning materials that

approximate 4 percent of their budget (Table 7). Real costs faced by poor households could be considerably higher when the opportunity cost (lost income) of attending school is included<sup>12</sup>.

29. *The current structure of subsidies does not target low-income individuals, but provides benefits to all students independently of their income level.* Within the budget for basic and secondary education, most direct and indirect subsidies appear under the categories “Operations Subsidies for Teaching Institutions” and “Public Actions.” Together, these two categories capture 7 percent of the current budget, but real subsidies account for only 40 percent (other expenditure categories within these two budget lines are mostly related to administration). Among these, the majority are food related subsidies (75 percent) that are not targeted. Targeted subsidies such as fellowships and direct support to low-income families represent only 18 percent of total subsidies (Table 8).

30. *In higher education, subsidies are also poorly targeted and over-generous; and students face symbolic contributions for subsistence services which in practice are not fully paid.* The majority of students (83 percent) have access to fellowships (Table 9). While the level of the fellowship is supposed to be related to the student (or family) income, in practice the majority of students have access to the highest fellowship that amounts to DA 900 (US\$12) per month. Fifty three percent of students receive subsidized housing and food, and all receive transport subsidies. The level of the subsidies is considerable, even without taking into account the costs related to personnel and services which, given data constraints, have not been included in the estimates of unit costs. Hence, in the case of food and transport, the subsidy is over 90 percent, while in the case of housing it approximates 85 percent. While student contributions are merely symbolic, the aggregate numbers suggest that 20 percent of these contributions are not taking place. Indeed, expected contributions should approximate 3 percent of total expenditures in students subsistence, but effective contributions represent only 2.2 percent. The Government has started to look at alternatives to rationalize the allocation of these subsidies. Some of the schemes to be considered are discussed in section D.

**Table 8: Targeted interventions represent less than 7 percent of total operations subsidies for teaching institutions and public actions programs (thousand DA)**

Type of subsidy	Expenditure	Share	Level of targeting
<b>Food</b>	2,604,879	75.4%	LOW
<b>Materials</b>	203,800	5.9%	LOW
<b>Fellowships</b>	486,731	14.1%	HIGH
<b>Support low-income students</b>	147,601	4.3%	HIGH
<b>Health services</b>	13,213	0.4%	LOW
<b>Total</b>	<b>3,456,224</b>	<b>100%</b>	
<b>Share in “Subsidies” and “Public Actions” budget lines</b>	<b>40.4%</b>		

Source: Algeria. Current Budget 2000.

<sup>12</sup> Other factors such as parents’ aspirations and community involvement are known to be important determinant of dropout rates, but little is known about them in the case of Algeria.

**Table 9: In higher education, subsistence costs faced by students deviate widely from real costs**

	Total costs (000 DA)	Unit cost	Beneficiaries	Share of beneficiaries	Contribution from students	Total contributions (000 DA)	Implicit subsidy
<b>Fellowships</b>	4,300,000		389,500	83%			
<b>Food</b>	7,280,000	8,456					
<i>Breakfast</i>	601,974	2,405	250,216	53%	180	45,038	92.52%
<i>Lunch</i>	3,941,779	10,936	360,450	76%	432	155,716	96.05%
<i>Dinner</i>	2,736,246	10,936	250,216	53%	432	108,093	96.05%
<b>Transport</b>	1,450,000	3,081	470,696	100%	180	84,725	94.16%
<b>Housing</b>	853,535	3,411	250,216	53%	480	120,103	85.93%
		<b>Total</b>	<b>470,696</b>			<b>513,678,144</b>	
					Observed	428,468,000	
					Collection rate	83.41%	

Source: Budget of the *Office National des Oeuvres Universitaires*. Numbers in italics have been estimated on the basis of the following assumptions: Only students who receive housing benefits have access to breakfast and dinner services. Fifty percent of external students also have access to lunch. The cost of breakfast represents 22 percent of the cost of lunch and dinner (based on the study of University Social Services, 2001). The cost of a lunch is then computed to reproduce the observed direct total expenditures in food. Costs do not include wages or general utility services which are part of the administrative budget of the *Office National des Oeuvres Universitaires*.

#### C.4 Effectiveness of Education Expenditures

31. *The high share of public financing of higher education and vocational training may be reducing the effectiveness of public expenditures.* Research shows that the highest social spillovers of investment in education occur at the primary and secondary levels. This is illustrated, for instance, by a lower rate of return to public investments in tertiary education than in primary education (Figure 7). Hence, most international education experts agree that the share of the subsidy in universal basic education (grades 1 through 9), should be higher than the share of the subsidy in higher education or vocational training<sup>13</sup>. In Algeria, expenditures of US\$4,000 for higher education and US\$1,730 for vocational training are considerably higher than expenditures in basic education at US\$760 (PPP adjusted)<sup>14</sup>. This is to be expected, as operational costs tend to be higher for higher education and vocational training. The problem, however, is that since the private sector contributes only marginally to finance education, the share of the unit cost that is being subsidized approximates 100 percent at all levels. Improving efficiency may require reviewing the share of the subsidy in higher education and vocational training<sup>15</sup>.

32. *High repetition and dropout rates are also reducing the return to investments in education.* While little is known about the returns to education in Algeria, there is some evidence that education reduces the probability of being unemployed. Indeed, the unemployment rate among individuals with only primary education is 36 percent, but drops to 25 percent and 20 percent for students with secondary and higher education. There is also some evidence that the average wage of workers who have the

<sup>13</sup> World Bank 2001. *Hidden Challenges to Education Systems in Transition Economies*

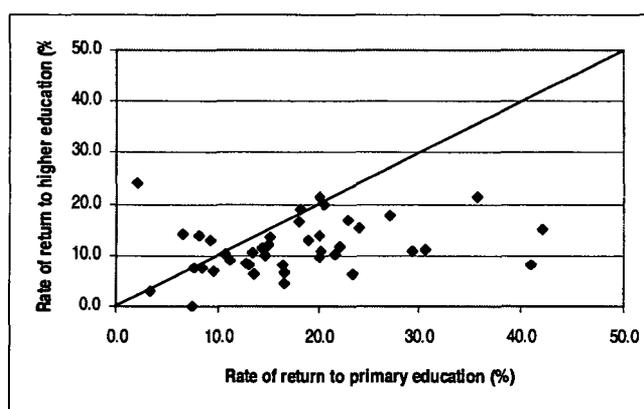
<sup>14</sup> During the last decade, public expenditures per student in basic and secondary education have been reduced by 20% in real terms. In the case of higher education, reductions are close to 30% while in vocational training they reach 40%

<sup>15</sup> It is important to mention that changes in these shares do not necessarily imply reallocating public resources from one level to another, but rather increasing the share of private financing.

*Baccalauréat* is 20 percent higher than that of workers with only a basic education diploma. However, high dropout and repetition rates reduce the probability of success and increase the average time necessary to obtain a high school diploma. This is a factor that may discourage private investment in education.

33. *In general, increasing the marginal return to investments in education will require not only reforming the education system, but also labor markets.* The economic and social benefits from investing in education have been widely documented. One of these benefits results from the linkage between investments in education and growth. The strength of this linkage, however, depends on how the education system and labor markets operate. In the case of Algeria, rigidities in the labor market and associated high unemployment rates may distort the gains from investment in education. On the other hand, mismatches between the supply and demand of skills may be fueling structural unemployment.

**Figure 7: The rate of return of public investment in primary education is usually higher than the rate of return of investments in tertiary education**



Source: OECD. Dots represent countries.

## D. POLICY IMPLICATIONS

### D.1 General Considerations

34. *The types of problems that the education system in Algeria is currently facing are common to other economies in the process of transition from a centralized system of resource allocation to a system where markets and prices play a more prominent role.* A recent study of education systems in 27 transition economies in Eastern Europe reveals various similarities to the Algerian case. As in Algeria, education systems in these countries considered had been highly successful in securing access to education; high enrollment rates were observed at all levels and adult literacy was nearly universal. During the 1990s, however, education systems deteriorated and today have joined the ranks of the deeply troubled sectors. Poor macroeconomic performance and tightened budget constraints that forced countries to reduce teacher wages and provide non-wage inputs were part of the problem. Also problematic was the failure of education systems to adapt to the new rules imposed by liberalization. Today, as in Algeria, transition economies face three major challenges: (i) realign the *financing* of their education systems with fiscal realities; (ii) ensure the fairness and *equality* of educational services (considering that in market economies, differences in access to human capital amplify income inequalities by affecting unemployment probabilities and wages); and (iii) improve *efficiency* in the use of inputs that today reflect allocation decisions that were made in physical terms without the intermediation of prices or budgets.

35. *The general strategy that has been followed in other transition economies is four-fold: (i) refocus the role of the Government by reducing its involvement in higher education and vocational training programs while concentrating on primary and secondary education; (ii) improve efficiency at all levels through a better input-mix and by contracting out the production of non-teaching services; (iii) adopt a more selective use of subsidies both in terms of the types of services subject to these subsidies and their allocation across population groups; and (iv) introduce alternative management practices which focus on the linkage between resources invested and learning outcomes.* Reducing government participation in higher education and vocational training has usually involved a more active role of the private sector, both in the provision and financing of education services. Higher efficiency, on the other hand, is related to a more productive and better paid teaching force and the reduction of administration costs. Finally, a more efficient and equitable use of subsidies implies devising targeting mechanisms such as mean-tested schemes to reach the poor while cost-recovery systems are implemented, particularly at the level of non-teaching services (e.g., food).

36. *In Algeria, the strategy that the Government is considering also focuses on reviewing the role of the public sector, improving efficiency and quality, and rationalizing subsidies.* As in other transition economies, priorities are expected to shift from higher education and vocational training to basic and secondary education. Improvements in efficiency will also be necessary to meet the Government's objectives of improved quality and better access without increasing education expenditures to unsustainable levels. In addition, financial sustainability will require rationalizing the use of subsidies, particularly in higher education, to concentrate on low-income population groups, thus achieving higher social welfare gains with lower expenditures. This section develops specific recommendations to implement the government strategy. Since the evaluation and implementation of these recommendations fall under different line ministries, the discussion has been organized by education level. In each case, separate recommendations are made in three categories aiming at: (i) higher efficiency; (ii) better quality and effectiveness; and (iii) better equity.

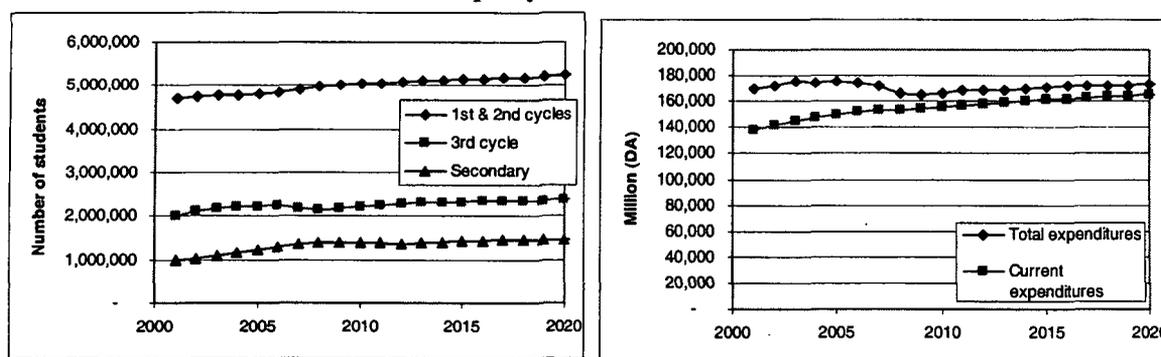
## **D.2 Recommendations for Basic and Secondary Education**

### *Current Perspectives and Government Initiatives*

37. *Given a favorable demographic transition, the basic and secondary education system could continue to expand without requiring an increase in the share of its expenditures in GDP; under this scenario, however, the number of students dropping out of school would continue to increase (particularly among low income families), infrastructures would continue to deteriorate, and teachers' wages would continue falling relative to per capita income.* The number of new students entering the first year of basic education will slow down due to the demographic transition that is taking place in Algeria. It is expected that the growth rate of the population of 0 to 14 years old will fall within the next five years, and eventually will become negative (Table 1). Under this scenario and given the dropout and repetition rates observed during the school year 2000-2001, the number of students in basic and secondary education could reach 8.2 million by 2005, while expenditures would fall to 3.5 percent of GDP (Figure 8). Each year, however, over 400,000 students would drop out of school while the ratio between teachers' wages and GDP per capita would decrease by 3 percent per year.

38. *The major challenge is, therefore, to improve the internal efficiency of the system through a better trained and better paid teaching force, while freeing resources to maintain school buildings, ensure an adequate supply of teaching materials, and strengthen assistance programs to low income population groups.* Meeting these challenges could demand additional resources equivalent to 1 percent of GDP, therefore, efficiency gains become essential.

**Figure 8: Projected number of students and expenditures in basic and secondary education in the absence of policy interventions**



Source: Education simulation tool, using data from the Ministry of National Education.

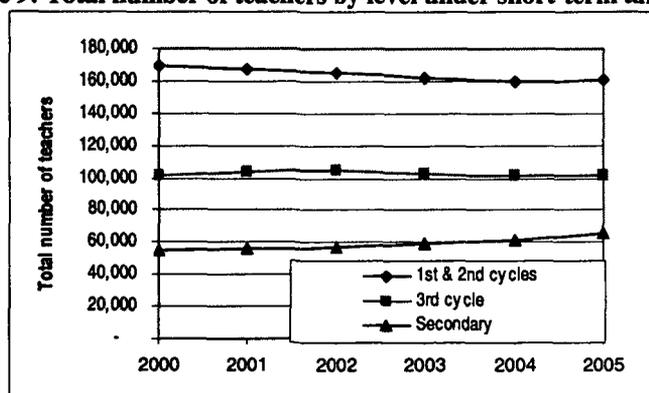
39. *Algeria has already initiated a process to rationalize the allocation of inputs in order to contain costs while improving the quality of education and redirecting subsidies to low-income population groups.* Interventions that the Government has implemented include increasing the number of students per teacher (no new teachers have been hired since 1995), raising requirements on academic credentials for teachers (Baccalauréat +3 in primary education, Baccalauréat +4 in the third cycle, and Baccalauréat +5 in secondary education), providing incentives for teachers to move to rural areas, and defining criteria to identify and target low-income students, particularly orphans. The following policy recommendations, which at this stage focus on system-wide improvements, build upon current efforts of the Ministry of National Education and emphasize a gradualist approach to achieve proposed targets.

*Actions to Improve Efficiency and Financial Sustainability*

40. *Continue efforts to increase the number of students per teacher.* Research shows that countries can target ratios of 40 students per teacher in basic education and 30 students per teacher in secondary education without negative impacts on quality. At the international level, the number of students per teacher ranges between 15 and 40 for basic education and 10 to 35 for secondary education. In Algeria, current levels are 28 in primary education, 20 in the third cycle of basic education, and 18 in secondary education. Taking into account current structural constraints (such as class size and the size of the pedagogic divisions), it is reasonable to expect that targets of 30, 22 and 20 students respectively could be achieved by school year 2004-2005. Additional efforts could be envisaged in the long-run, to reach levels of 35, 25 and 25 by the year 2010. To achieve the short-term targets, the number of teachers in primary education may need to be reduced. However, in the case of the third cycle of basic education and in the case of secondary education, additional teachers would be required (Figure 9). The Ministry of National Education, through its planning division, needs to develop a detailed plan (at the regional level<sup>16</sup>) where future teachers' needs are explicit and potential transfers from the first and second cycles to the third cycle are considered. The policy of freezing new hiring in primary education should continue. It is important, however, that this policy does not jeopardize the objective of improving the quality of the teaching staff. Hence, in some cases, substitutions between poorly trained and highly trained teachers may be desirable. Appropriately designed and financed severance packages could be used to compensate the former.

<sup>16</sup> To this end, demographic data, the school map, and the education simulation tool need to be updated.

**Figure 9: Total number of teachers by level under short-term targets**

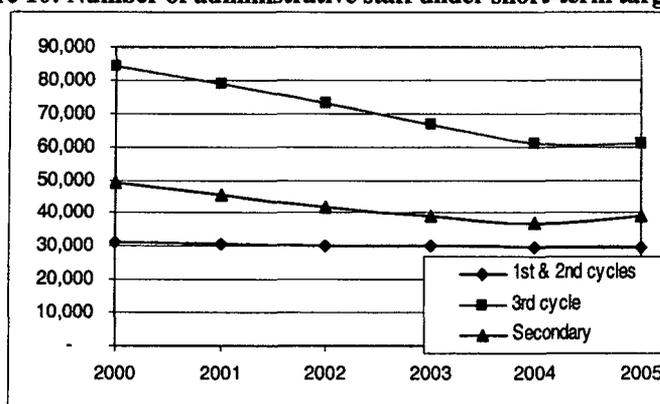


Source: Education system simulation tool.

41. *Develop and implement a plan to gradually reduce the number of administrative staff per teacher in the third cycle of basic education and in secondary education.* The increase in the number of administrative staff per teachers observed in the last few years has been attributed to the hiring of security personnel; as the security situation improves in Algeria, the Ministry of National Education could consider their demobilization. Today, according to the 2000 budget, there are close to 80 administrative staff per 100 teachers in the third cycle of basic education (excluding staff from central and local administrations), and 88 administrative staffs per 100 teachers in secondary education<sup>17</sup>. A target of 60 administrative staff per 100 teachers is proposed for year 2005 (Figure 10). The implied reductions in administrative staff are not easy to implement, particularly since they coincide with a relatively high level of unemployment (a similar situation occurs in Eastern European countries). However, the Government could consider a combination of re-conversion programs (from administrative to teaching staff) and severance packages. Inequalities in the distribution of resources across wilayas may lead to situations where there is a shortage of staff in some regions while surpluses are observed in others. Again, the planning division of the Ministry of National Education should propose a plan to rationalize the level and distribution of administrative staff at the regional level.

<sup>17</sup> These includes several categories of education advisors, administrative assistants, administrative agents, cooks, store managers, secretaries, dactylographers, and polyvalent agents (over 12,000).

Figure 10: Number of administrative staff under short-term targets



Source: Education simulation tool. Projections take into account policy targets for the number of students per teachers.

### *Actions to Improve Quality*

42. *Increase expenditures in maintenance, services and teaching materials while reducing effective costs.* The 2000 budget shows that expenditures in maintenance, services and materials are considerably low. The lack of subcontracting and outsourcing practices suggests that the works that are implemented and the materials and services that are bought are not paid at minimum costs. Looking forward, actions may need to be undertaken on two fronts: first, procurement procedures would need to be reviewed in order to promote competition and lower costs; and second, additional resources may need to be allocated. At this stage, it is premature to define the level of new budget allocations because a detailed study of effective demand would be required. Nonetheless, at the aggregate level, current levels of US\$8 per student per year seem considerably low. Thus, a program which attempts to increase this amount by 50 percent within the next five years could be considered<sup>18</sup>. The additional resources should be concentrated in teaching institutions according to broad budget lines.

43. *Strengthen continuous training programs for teachers while reviewing their compensation package and introducing incentives for professional development.* As previously discussed, the current level of training among teachers is low, particularly in the case of basic education. This is considered to be the main cause of the observed increases in repetition rates, particularly in the third cycle and in secondary education. Raising teaching standards by demanding higher education diplomas will certainly help to solve the problem, but strengthening continuous education programs which target current teachers remains the critical intervention.<sup>19</sup> Indeed, the majority of current teachers are below 40 years of age and will, therefore, likely continue to teach for the next 10 to 20 years. The Ministry of National Education, through the *Commission Nationale de Programmes* and the *Centre National de la Formation des Cadres de l'Éducation*, is currently considering an ambitious program that uses information technologies to promote distance learning among teachers. Discussions about technical demands and the contents of electronic training programs are currently taking place. While the project is appealing, it is recommended that the Ministry of National Education proceeds with caution and looks at the experience of other countries which have implemented similar systems. Before proceeding to full-scale implementation, the system should be piloted in selected localities. Its expansion will then depend on a careful evaluation of

<sup>18</sup> These expenditures refer only to third cycle and secondary education. The responsibility for mobilizing resources to finance administrative expenditures in primary education is assigned to local administrations.

<sup>19</sup> Other interventions that the Government is implementing to address the problem of increasing repetition rates include the actualization of the curricula and of the textbooks. La "Commission Nationale des Programmes" is currently working on this reform.

potential benefits and costs relative to the traditional system. The latter should also be evaluated and rationalized prior to considering budgetary allocations towards the training centers. In parallel, the system of teacher remuneration, incentives and evaluation would need to be reviewed. Indeed, the success of any continuous training program depends on a teacher's ability to internalize the benefits. While today a 25 percent prime on wages is supposed to be allocated on the basis of performance, in practice it has been used as the only mechanism to compensate teachers from falling real wages, and is, therefore, allocated universally. Looking forward, teacher remunerations should be linked to their qualifications and to the results produced in the classroom.

### *Actions to Improve Equity*

44. *Strengthen aid to low income individuals by reviewing the current policy on subsidies levels and allocations.* In the previous section we showed that subsidies are benefiting high-income population groups, while the support received by low-income population groups may be insufficient to reduce dropout rates and increase girls' enrollment rates. Given budgetary constraints, the Government could consider the possibility of raising available direct subsidies while introducing user fees, particularly for such identifiable elements of educational services as textbooks, laboratory materials or food. Other countries in transition, such as Bosnia-Herzegovina, Georgia and Russia, are following this strategy. This type of system, however, needs to be carefully designed to avoid negative impacts on the poor. To this end, a better understanding of poverty in Algeria is necessary. Vulnerable groups and their regional distribution should be identified while their economic behaviors, for instance in terms of the demand for education, are studied.

45. *Review the mechanisms used to allocate resources across regions in order to improve infrastructure and the quality of education in low-income wilayas.* Traditionally, Algeria has used a system of "money follows students" to allocate resources across wilayas. While this system was reasonably effective to universalize access to education, its limitation is the implicit assumption that all regions face the same input costs and are subject to the same set of exogenous shocks (yet the probability of adverse events such as vandalism or bad weather varies by region). Thus, over time, regional inequalities in terms of infrastructure and the quality of education have developed. Today 3,000 schools lack access to basic services such as electricity and heat. It is, therefore, necessary to update the inventory of needs in terms of infrastructure, identify priorities and reallocate resources accordingly. Looking forward, an efficient and equitable allocation of resources across regions will require an updated mapping database for each catchment area and a system to project regional demands. While some responsibility for revenue generation can be assigned to local governments (this is a strategy that has been followed in Russia), it is important that the central government continues to coordinate regional allocations, particularly by ensuring transfers from high-income to low-income regions.

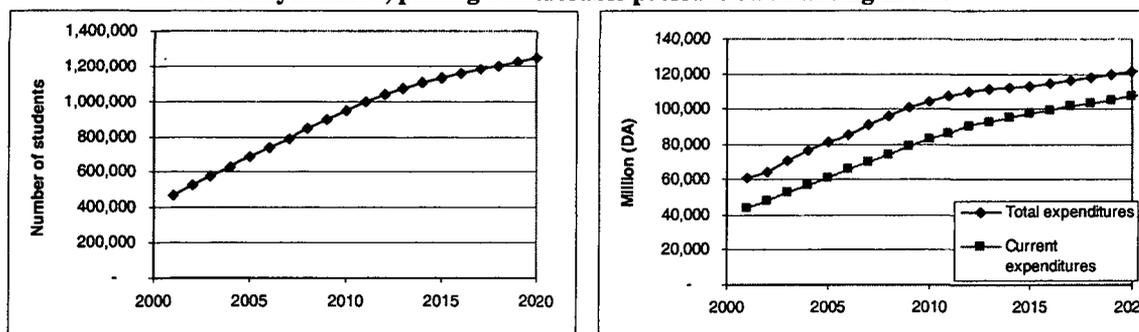
## **D.3 Recommendations for Higher Education**

### *Current Perspectives and Government Initiatives*

46. *Within the next five years, the number of students enrolled in higher education is expected to increase by more than 50 percent, putting considerable pressure on current capacities; with current unit costs, the share of expenditures in GDP is expected to increase considerably.* During the last five years, the number of new students in higher education averaged 80,000 per year. This trend is expected to accelerate in the future, driving the total number of students enrolled in higher education to over 730,000, from 470,000 today. If the current structure of costs and subsidies persists, the share of current expenditures would need to increase from 1.1 percent of GDP today to 1.4 percent by 2005. When

investments are included, total expenditures approximate 2 percent of GDP. Expenditures in 2010 could be equivalent to 4 percent of GDP or higher, if current dropout and repetition rates in basic education decrease (Figure 11).

**Figure 11: The number of students enrolled in higher education could increase by 50 percent between year 2001 and year 2005, putting considerable pressure on financing needs.**



Source: Education simulation tool. Assumes that 90 percent of students who pass the Baccalauréat enroll in higher education (the average for the last five years has been 86 percent, but it has been increasing), while 12 percent of the stock of students graduate (the historical graduation rate has been 12.6 percent). The average investment cost per student is estimated at DA 146,425. Investment costs per student for housing are two times higher.

47. *The Ministry of Higher Education is aware of the frail financial situation of the system and through its general secretariat has put forward a set of proposals aimed at containing costs.* In its action program, the Ministry of Higher Education considers interventions aimed at: (i) diversifying financial sources; (ii) rationalizing operating costs; (iii) introducing a system of budget allocations across universities based on performance; (iv) opening the participation to the private sector in higher education; (v) reforming the system of students' subsistence expenditures (*oeuvres universitaires*); (vi) updating the curricula and promoting short-term training programs; and (vii) introducing distance learning programs<sup>20</sup>. The general lines of the strategy, although ambitious, are sound and will certainly orient the higher education system in the right direction. In the short term, priorities need to be established. In this section, financing mechanisms of the higher education system are discussed, in particular the *oeuvres universitaires*.

#### *Actions to Improve Efficiency and Financial Sustainability*

48. *Increase private sector (students and their families) financing, given that the private sector captures the majority of the benefits resulting from higher education, while public subsidies are limited to those justified by resulting social benefits<sup>21</sup>.* The mechanisms to operationalize this principle are quite complex. Nonetheless, the Government has already started to consider specific actions. The policy recommendations developed in this section build upon these government initiatives.

49. *Reform the financing system of universities' expenditures in student subsistence by gradually and selectively reducing indirect subsidies related to food, transport and housing, and strengthening fellowship programs.* This strategy, which basically consists of transforming indirect subsidies into direct subsidies, has been favored by the Government.<sup>22</sup> As subsidies are reduced, centers providing services would need to compete with other providers (including the private sector) and, therefore, efficiency and

<sup>20</sup> See *Programme d'Actions pour l'An 2000 dans le Secteur de l'Enseignement Supérieur et de la Recherche Scientifique/Doc. 21. 2000/ TB-Rev.03.*

<sup>21</sup> See for instance *L'Aide Financière aux Etudiants de l'Enseignement Supérieur. Quels Choix pour l'Algérie.* Étude MESRS/CREAD. Juin 2000.

<sup>22</sup> *Ibid.*

quality are expected to improve.<sup>23</sup> To generate savings, however, this strategy requires that the Government rationalize the distribution and the level of fellowships (see next paragraph). The 2001 budget shows that social expenditures per student, excluding fellowships but including administrative costs, account for DA 30,700 or US\$400 per year (transport costs account for 10 percent, food for 50 percent, and the remaining 40 percent goes to administration costs, including the operation and maintenance of housing facilities). Students' contributions to the financing of these costs amount to DA 428.5 million per year, or 3 percent of the per capita cost. The proposal is to increase student participation to a target of 30 percent by year 2005. This can be achieved in several ways, for instance, by eliminating transport subsidies while reducing food expenditures from 50 percent to 30 percent. The best combination and the timeline would need to be discussed and negotiated with student organizations. The important message, however, is that delaying the rationalization of the *oeuvres universitaires* could jeopardize the financial sustainability of the higher education system.

50. *Gradually increase enrollment fees and tuition.* Food, housing and transport subsidies are only part of the total subsidies that students receive. Indeed, excluding social expenditures, on average, each student costs the State close to DA 90,000 per year (US\$1,100). Today, students pay enrollment fees that approximate DA 500 per year, regardless of income level. As discussed earlier, effectiveness and equity could be improved if the public expenditure per student in higher education was reduced and the subsidies concentrated on low-income individuals. To this end, the student tuition could gradually increase. Realistic targets would need to be defined by the Government in coordination with student associations. In the next section, for illustrative purposes, we simulate the impacts of a gradual increase in the average tuition to DA 4,550 in year 2005.

### *Actions to Improve Equity*

51. *Reinforce and rationalize fellowship programs.* As subsidies are phased out, reinforcing fellowship programs becomes a priority. Today, poor selectivity is grounded in the belief that the majority of university students do not have enough means to finance their studies. While this could be generally true given that few students have a source of income or accumulated savings, and that the wealth of their family does not necessarily account as their own, it does not imply that the Government should become the alternative source of financing. The role of the Government should be limited instead to ensure that, given imperfections in capital markets, students have *access* to appropriate financing mechanisms such as students loans (see next section). Given these considerations, the recommendation to the Government is to gradually reduce the share of students who have access to fellowships by making the criteria for obtaining a fellowship more stringent (focusing on academic and socioeconomic indicators). In this way, resources can be concentrated in fewer and more generous financial packages. Reductions in indirect subsidies could be used to finance total fellowships. The Government could consider targeting a reduction in the number of beneficiaries to 50 percent by year 2005 while increasing the average fellowship to DA 1,600 per month.

52. *Implement a means-tested scheme to allocate subsidies across students and develop a program of students loans.* For equity purposes, it could be desirable to distribute subsidies according to income levels. Hence, high-income students would pay a tuition that is above the average, while low-income students would pay a tuition which is below the average. The tuitions could also be related to academic performance. For instance, other things being equal, repeaters would pay a higher tuition. This system has been used successfully in Latin American universities (Ecuador, Chile, Bolivia and Colombia), using a combination of income, economic sector, and geographic location as proxies for socio-economic status. As previously discussed, it is also important to ensure that students facing liquidity constraints have

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<sup>23</sup> Clearly, higher efficiency may imply reducing personnel, an undesirable consequence given already high unemployment rates. Thus, subsidies should be phased out gradually. In addition, severance packages should be considered.

access to appropriate financing mechanisms. To this end, a sustainable program of student loans could be put in place. While alternative designs could be envisioned, international experience suggests that the creation of a new organization to manage the program should be avoided. Alternatively, arrangements could be implemented with existing financial institutions. Usually, the Government would become a guarantor of the loans, which would be repaid upon student graduation. While a certain level of subsidy could be considered, it should be implemented in a sustainable manner.

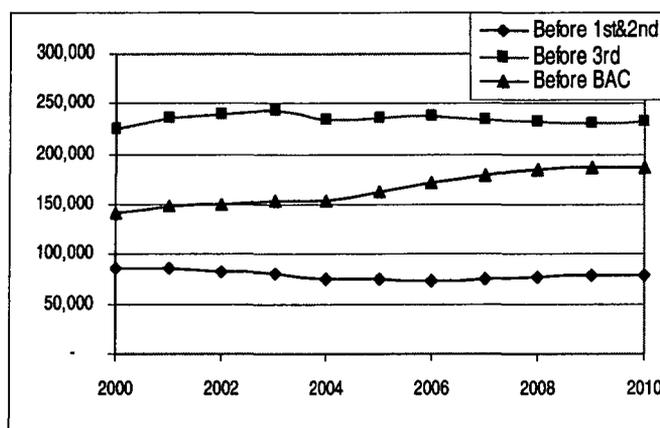
#### D.4 Recommendations for Vocational Training

##### *Current Perspectives and Government Initiatives*

53. *Vocational training in Algeria has concentrated on initial training as the system has become a mechanism to assist those students who drop out of basic or secondary education; the number of students who will attempt to enter the system is expected to increase from 366,000 today to 790,000 by 2005 (Figure 12). As discussed in section A, close to 400,000 students currently drop out of basic or secondary education each year, the majority in the last year of the third cycle of basic education (25 percent) and in the last year of secondary education (17 percent). Of these students, 80 percent are eligible for vocational training programs and, in the recent past, 40 percent have been admitted to either in-class training programs or apprenticeship programs. With current unit costs, the share of vocational training expenditures in GDP is expected to increase by 4 percent per year in real terms.*

54. *This “social assistance” function is not in line with the original mandates of vocational training and creates distortions that threaten the quality of education as well as the financial sustainability of the system. The Ministry of Vocational Training has put forward an ambitious strategy to reform the system which aims at raising the status of vocational training in Algeria, while making the system an integral part of the education sector. The strategy emphasizes that initial vocational training should concentrate on qualified students who want to pursue a technical specialization, and not on those students who failed to stay in the formal education system. To this end, the strategy proposes to review the role of the different training centers, to reorient the specializations offered in light of sectorial demands, to diversify the source of financing while rationalizing the use of resources, and to increase the quality and technical expertise of the teaching staff.*

**Figure 12: The number of students dropping out of basic and secondary education will continue to grow over time**



Source: Education system simulation tool.

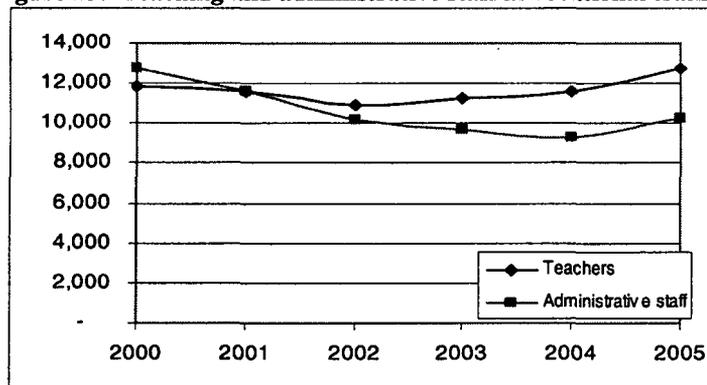
55. While in the medium-term the success of the reform of the vocational training system will depend on the success of the reforms introduced in basic and secondary education, short-term measures can be considered to improve efficiency, effectiveness, and the financial sustainability of the system. In the years to come, the main users of vocational education services will continue to be students who have dropped out of the formal system. Providing them with an alternative set of skills should be a clear priority for the Government. Nonetheless, there are important questions to answer in terms of the best way to proceed. For instance, is new capacity required, or should the focus be on identifying and financing apprenticeships? Which type of skills are required? The policy recommendations outlined below address some these and other questions. The recommendations address urgent problems while at the same time paving the way to a medium-term reform.

*Actions to Improve Efficiency and Financial Sustainability*

56. Reduce investment costs by prioritizing apprenticeship programs. To date, the average cost of a training center with capacity for 300 students approximates DA 100 million. This type of investment cannot be sustained over time and could be avoided by reinforcing training partnerships with private and public firms. This implies that apprenticeship programs would receive priority over in-class training. Initially, the Ministry of Vocational Training could target investment costs per student which are similar to those observed in secondary education.

57. Reduce expenditures in personnel by rationalizing the distribution of teachers and administrative staff. Over 80 percent of the budget of the training centers is spent on personnel. The planning division of the Ministry of Vocational Training should prepare a medium-term staffing plan that targets increases in the number of students per teacher and reductions in the number of administrative staff per teacher. Today, there are 23 students per teacher and one administrative/support staff per each teacher. By year 2005, the Ministry of Vocational Training could consider targets of 25 students per teacher and 80 administrative/support staff per 100 teachers (Figure 13). The rationalization of staffing levels is not an easy policy to implement, but it is a key condition of improving efficiency. A gradual approach coupled with well-designed severance packages could be considered.

**Figure 13: Teaching and administrative staff in vocational training**



Source: Education simulation tool.

58. Increase the share of extra budgetary resources by expanding “production training.” The system of production training allows training centers to engage in commercial activities, which at the same time are a mechanism for students to practice a given set of skills, and to keep 35 percent of the profits to finance the operating budget (the remainder of the profits are allocated to students and the implementation unit as incentives). In fiscal year 2000, production training mobilized resources amounting to DA 730 million. These generated profits that were able to finance 2 percent of the operating budget. The Ministry of Vocational Training could consider increasing the share of these resources to 10 percent by year 2005.

59. *Streamline the process to allocate resources across training centers while promoting competition with the private sector.* In order to improve the quality of training services, two interventions could be considered. The first is to create a mechanism to distribute budgets across centers on the basis of performance indicators. This type of mechanism is already being considered within the Ministry of Vocational Training, but effective implementation has been slow. The second is to promote competition between public and private centers. To this end, the list of eligible private programs would need to be extended and validation procedures simplified. In parallel, subsidies to students would need to be gradually phased out. Hence, the tuition that today applies mostly to evening programs could be extended to in-class programs. Differentiated rates by sector could also be considered. For instance the tuition for programs in the sector of information technologies, with high growth potential, could be above the average. Clearly, there is a rationale to assist low-income students, but to this end, a mechanism to allocate exemptions or discounts would need to be implemented.

#### *Actions to Improve Quality and Effectiveness*

60. *Re-engineer the curricula in partnership with the private sector, while reinforcing the technical expertise of the teaching staff.* Higher effectiveness requires reorienting training programs towards sectorial demands. To this end, a study that identifies skill shortages in the economy, and recommends changes to the menu of training programs and their content should be conducted. This study will also dictate the composition of skills within the teaching force of the centers, and, therefore, the needs in terms of continuous training and the qualifications of new staff. A bottom-up approach is recommended, where the private sector is the driver of the process.

#### *Actions to Improve Equity*

61. *Rationalize the use of fellowships and wage subsidies.* To date, fellowship and wage subsidies capture 7 percent of total expenditures in the training centers. While little data is available about the beneficiaries, selection criteria are lax. As in the case of higher education (see paragraph 49), it is recommended to define more stringent criteria based on academic and social indicators. In terms of wage subsidies, the possibility of increasing private participation should be considered.

### **E. PROPOSED INTERVENTIONS AND FISCAL IMPLICATIONS**

62. *The purpose of this final section is to illustrate the potential fiscal impacts of the policy interventions presented in this review.* The policy recommendations that have been discussed in the previous section can be summarized as changes in specific policy parameters<sup>24</sup>. These are summarized in Table 10 (below) and have been classified into two groups: (i) parameters related to changes in the quality of education (e.g., repetition rates); and (ii) parameters related to changes in efficiency and improvements in equity.

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<sup>24</sup> Clearly, not all the policies discussed can be easily simulated. An example is the reallocation of resources across wilayas. These have been excluded.

**Table 10: Basic policy interventions to reform the education sector**

<b>Improvements in quality</b>	<b>Current value</b>	<b>Proposed target for fiscal year 2005</b>
Dropout rate end of 2 <sup>nd</sup> cycle	5.6%	4.5%
Dropout rate end of 3 <sup>rd</sup> cycle	19.3%	15.5%
Dropout rate at the Baccalauréat	23.8%	19%
Repetition rate end of 2 <sup>nd</sup> cycle	17%	13.5%
Repetition rate end of 3 <sup>rd</sup> cycle	30%	24%
Repetition rate Baccalauréat	42.4%	35%
Expenditures in maintenance, services and materials		5% growth
Expenditures in public transfers for fellowships and low-income support relative to total wages		5% growth
Growth rate of teachers real wages at all levels		Growth = growth GDP per capita
<b>Improvements in efficiency and equity</b>	<b>Current value</b>	<b>Proposed target for fiscal year 2005</b>
<b>Basic and secondary education</b>		
Number of administrative staff per teachers 3 <sup>rd</sup> cycle	82 per 100	60 per 100
Number of administrative staff per teacher in secondary education	88 per 100	60 per 100
Number of students per teacher in primary education	27	30
Number of students per teacher in 3 <sup>rd</sup> cycle	20	22
Number of students per teacher in secondary education	18	20
<b>Higher education</b>		
Tuition in higher education per year (DA)	600	4,550
Per capita social expenditures in higher education excluding fellowships (DA)	30,690	21,483
Share of students receiving fellowships	82%	50%
Average fellowship per year (DA)	11,000	20,000
<b>Vocational training</b>		
Average number of students per teacher	23	25
Average number of administrative/support staff per teacher	1 to 1	80 per 100
Average investment cost per student (DA)	366,667	183,333
Extra-budgetary sources of income (share of total expenditures)	2%	10%

Sources: On the basis of discussions with Government officials.

63. *The results of the simulations suggest that in the absence of improvements in efficiency, better quality would require increasing the share of education expenditures in total GDP from 6.2 percent today to 7.4 percent in year 2005.* The major change would be in higher education where expenditures could go from 1.5 percent today to 2.4 percent of GDP (over a longer period of time these expenditures could approximate 3 percent of GDP). In the case of vocational training and basic and secondary education, expenditures could increase to 0.6 percent and 4.6 percent respectively.

64. *The gains from higher efficiency on the other hand, are not negligible and could account for 1 percent of GDP in 2005.* If reforms are introduced to improve efficiency across education levels, substantial savings could be achieved, particularly in the case of basic and secondary education and vocational training (Table 11). In the case of higher education, however, even if the proposed reforms were introduced, the share of current expenditures in GDP would need to increase by half a percentage point. This poses the question of whether a more aggressive rationalization of subsidies should be pursued.

**Table 11: Expenditures in the Education Sector with Improved Quality and Efficiency**

Fiscal year	Total expenditures (% GDP)				Total current expenditures (% GDP)		
	Total	Basic and Secondary Education	Higher Education	Vocational Education and Training	Basic and Secondary Education	Higher Education	Vocational Education and Training
2001	6.27%	4.32%	1.54%	0.40%	3.50%	1.12%	0.221%
2002	6.13%	4.18%	1.55%	0.40%	3.43%	1.16%	0.214%
2003	6.05%	4.06%	1.73%	0.25%	3.32%	1.21%	0.199%
2004	6.27%	3.95%	1.90%	0.42%	3.27%	1.29%	0.200%
2005	6.37%	3.91%	2.04%	0.42%	3.22%	1.39%	0.200%
2006	6.35%	3.87%	2.06%	0.41%	3.28%	1.49%	0.215%
2007	6.42%	3.77%	2.26%	0.39%	3.31%	1.59%	0.226%

Source: Education system simulation tool.

65. *In terms of the 2002 budget, higher real expenditures are expected at all levels and particularly in higher education (+4.3 percent).* In all cases, the increase would be driven by higher wages (Table 12). The increase is particularly important in the case of higher education because the total number of students enrolled is increasing faster and, therefore, demands in terms of teachers are greater. In all sectors, expenditures in new investments could be reduced relative to year 2001, thus helping to contain costs. In the case of basic and secondary education, savings could be used to increase operating expenditures, particularly those related to maintenance.

66. *There are several uncertainties surrounding these projections and, therefore, the results should be interpreted with caution.* Nonetheless, the main conclusions appear to be robust to changes in some of the model assumptions.

**Table 12: Percentage change in education expenditures for the budget 2002**

	Total	Basic and secondary education	Higher education	Vocational training
<b>Total</b>	1.59%	0.42%	4.89%	1.55%
<b>Current</b>		1.93%	7.74%	1.74%
<b>Wage</b>		1.34%	14.41%	1.29%
<b>Operations</b>		7.17%	7.67%	4.76%
<b>Subsidies</b>		7.17%	4.96%	4.76%

Source: Education system simulation tool

## ANNEX II: IMPROVING EFFICIENCY, EFFECTIVENESS AND EQUITY IN THE HEALTH SECTOR

### A. OVERVIEW OF THE HEALTH SYSTEM

1. The right of all citizens to health care is embodied in the Constitution of the Democratic and Popular Republic of Algeria. In 1974, the system of free health care in public facilities came into effect. This has resulted in a predominantly public service delivery system with limited but increasing private participation. The Ministry of Health and Population is responsible for the overall management of the public health system, and regulates the provision of private health services as well as NGOs. The following two sub-sections provide a summary of health indicators and the organization of the Algerian health system. In Section 2, health expenditures and financing mechanisms are analyzed. Section 3 discusses the efficiency, effectiveness, and equity of public health expenditures, and Section 4 presents recommendations for the health sector.

#### A.1 Health Indicators in Algeria

2. *Demographic and Epidemiological Transition.* Algeria is experiencing a very rapid demographic transition. The 1998 national census showed the population to be 29.3 million (with the population at the beginning of 2001 estimated to be 30.6 million). The population tripled from 1962 to 1998, but the growth rate has recently slowed dramatically, and now stands at 1.5 percent per year, after averaging 2.3 percent over the period 1988 to 1998. Contraceptive prevalence has steadily increased, reaching 62 percent in 2000 (50 percent for modern methods). While Algeria's demographic transition accelerated in the 1990s, its epidemiological transition was slowed by outbreaks of infectious diseases and worsening public health situations in parts of the country due to deteriorating infrastructure and continued political and social strife. The reported incidence of infectious diseases has begun to decline again (Table 1). Nonetheless, Algeria faces the double challenge of addressing the increasing prevalence of chronic (and expensive to treat) diseases in its population, while still being confronted with prevalent infectious diseases.

3. *Life Expectancy* at birth averaged 69 years in 1998, having increased from 53.5 years in 1970. Compared to other lower middle income countries and to the regional average of the Middle East and North Africa region, the life expectancy of Algerians is slightly higher.

4. *The Infant Mortality Rate (IMR)* has been estimated to be between 36.7 and 53.3, out of 1,000, children dying before their first birthday. In 2000, a national household survey calculated the rate to be 39. At this level, the IMR is comparable to the rate found in other lower middle income countries.

5. *The Maternal Mortality Rate (MMR)* is relatively high in Algeria compared to other countries at a similar income level. A national maternal mortality study carried out in early 2000 shows 117 maternal births for every 100,000 live births. Competing forces shape the maternal mortality rate – increased prenatal care and better birth conditions improve maternal survival at the same time that mothers are giving birth at older ages, with subsequently higher risk.

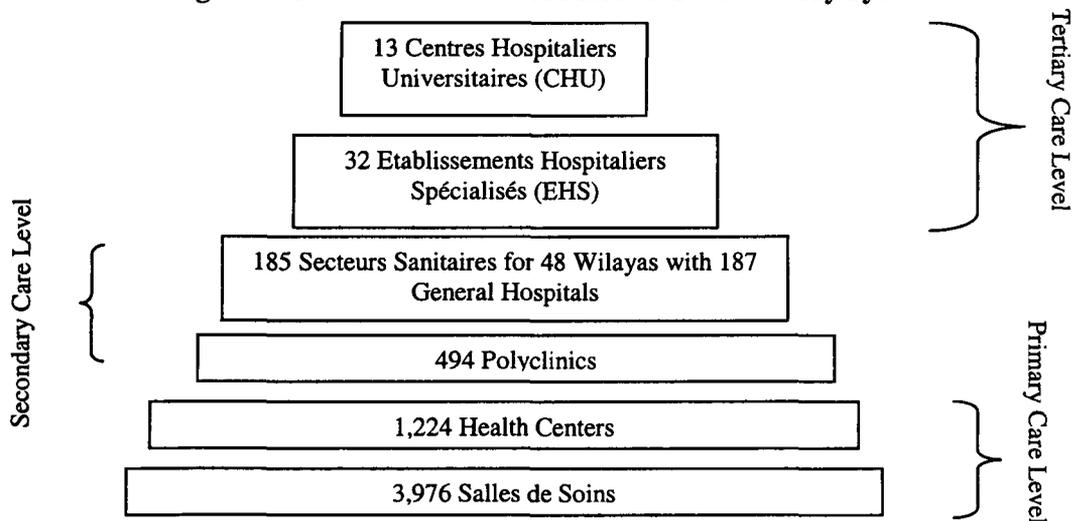
6. *Malnutrition.* Economic difficulties in the mid 1990s that reduced household purchasing power also led to an increase in malnutrition. The percentage of children under five years of age who suffer from low weight for their age increased from 9.2 percent in 1992 to 13.0 percent in 1995. This rate has since decreased substantially – it was measured at 7.9 percent by the 1999 household survey. However, the rate remains high in the southern part of the country – 17.8 percent.



**Table 1: Key Outcomes and Inputs of the Health Sector, 1991-2000**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Public Health Expenditure (% of GDP)</b>	3.1	3.2	3.4	3.2	3	2.9	2.9	2.8	2.65	
<b>Personnel (public &amp; private sector)</b>										
GP physicians in public sector			9,986			10,958	11,141	11,592		11,151
GP physicians in private sector			4,623			4,946	5,100	5,191		10,261
Specialist physicians in public sector			5,373			5,450	5,627	9,679		
Specialist physicians in private sector			2,220			2,746	3,095	3,508		4,058
<i>Total public sector physicians</i>			24,428			25,230	25,281	30,309		
<i>Public sector physicians per 1,000 pop</i>			0.9			0.9	0.9	1.0		
<i>Total physicians per 1,000 population</i>			1.25			1.24	1.25	1.29		
Paramedical personnel (000)			86,072			85,296	85,971	86,241		84,878
<i>Paramedical personnel per 1,000 pop</i>			3.18			2.99	2.96	2.88		2.77
<b>Infrastructure</b>										
# of CHUs	13	13	13	..	13	13	13	13	13	13
# of Beds in CHUs	16,705	16,390	16,501	..	16,093	16,093	15,368	13,045	13,045	
# of Beds in CHUs per 1,000 pop	0.7	0.6	0.6	..	0.6	0.6	0.5	0.4	0.4	
# of EHSs	19	19	19	..	19	21	25	31	32	32
# of Beds in EHSs	5,368	5,469	5,333	..	5,333	5,913	5,996	6,203	..	
# of Beds in EHSs per 1,000 pop	0.2	0.2	0.2	..	0.2	0.2	0.2	0.2	..	
# of General hospitals	180	180	180	..	184	185	185	187	187	185
# of Beds in General hospitals	30,655	30,443	30,968	..	32,304	31,984	31,425	33,319	33,319	
# of Beds in General hospitals per 1,000 pop	1.2	1.2	1.1	..	1.1	1.1	1.1	1.1	1.1	
# of Public maternities	414	382	426	..	448	432	433	485	..	295
# of Beds in public maternities	4,248	4,158	4,725	..	4,725	4,418	4,212	4,862	..	3,132
# of Beds in public maternities per 1,000 pop	0.2	0.2	0.2	..	0.2	0.2	0.1	0.2	..	
# of Beds in private maternities	706	653	653	..	642	..	..	470	..	
# of Polyclinics	445	450	455	..	471	455	465	482	482	494
# of Health centers	1,112	1,111	1,123	..	1,125	1,143	1,114	1,150	1,150	1,224
# of Salles de soins	3,618	3,757	3,876	..	4,174	4,284	4,222	4,390	4,390	3,976
<i>Total number of public beds</i>	56,976	56,460	57,527	..	58,455	58,408	57,001	57,429	63,423	69,259
<i>Total beds per 1,000 population</i>	2.24	2.14	2.10	..	2.03	2.00	1.96	1.95	2.08	2.26
<i>% of Equipment out of service</i>		18%	21%		19%	17%	20%	20%		
<b>Utilization</b>										
Inpatient admissions			1,688,539			1,670,670	1,739,162	1,606,246		
Inpatient admission rate (% of population)			6.2%			5.8%	6.0%	5.4%		
ALOS			6.17			5.86	5.89	6.15		
Outpatient consultations						20,770,920	27,795,301	34,812,440		
Outpatient consultations per capita						0.73	0.96	1.19		
Hospital occupancy rate			55.0%		51.3%	51.3%	56.4%	53.0%		
CHU occupancy rate			68.0%			64.2%	76.0%	79.0%		
EHS occupancy rate			70.0%			69.4%	69.0%	68.0%		
General hospital occupancy rate			44.0%			41.1%	42.0%	42.0%		
<b>Morbidity</b>										
Tuberculosis	6,625	5,782	8,684	13,738	13,663	16,776	16,617	15,334	15,314	
Typhoid	3,198	2,489	2,331	4,530	4,597	4,259	3,278	2,588		
Diphtheria	9	23	246	972	1,060	107	30	57	17	3
Tetanus	42	44	57	51	34	26	33	25	28	10
Measles	5,969	8,823	31,141	9,499	9,216	21,003	19,573	3,302	2,505	1,889
Cholera	131	100	17	149	6	5	0	0	0	0
Malaria	229	106	84	206	107	221	197	256	701	
HIV/AIDS	269	344	402	477	524	..	..	810	903	
Life expectancy	67					68			69	70
Births per 1,000	30	30	28	28	25	23	23	21	20	20
Deaths per 1,000	6	6	6	7	6	6	6	6	6	6
Total Fertility Rate	4.4	4.3	4.1	4.0	3.5	3.1	3.1	2.8	2.7	2.4
Prevalence of low height for age (under 5)		18.1%			18.0%					18.0%
Prevalence of low weight for age (under 5)		9.2%			13.0%					6.0%
Maternal mortality ratio (per 100,000 live births)		215					146	137	117	
Infant mortality rate per 1,000		42.4								39

**Figure 1: Structure of the Public Health Care Delivery System in 2000**



9. Algeria has a three-tiered vertically integrated delivery system of care – there are 2.1 beds, 1.3 physicians (40 percent specialists), and 2.9 paramedical staff per thousand population. Over 99 percent of all beds, 71 percent of all physicians, and 63 percent of all dentists practice in the public sector, but only 8 percent of pharmacists do. Overall, 43 percent of all specialist physicians and 31 percent of the generalists work in the private sector. The private sector is an increasingly important source of health care (especially at the primary health care level), but coordination between the public and the private sector has so far been limited.

10. In terms of service use, the annual hospital admission rate is 5.4 percent of the population (6.2 percent in 1993), the occupancy rate is on average 53 percent (55 percent in 1993), and the average length of stay (ALOS) is 6.15 days overall (6.27 in 1993). The outpatient consultations per capita in the public health system are on average 1.2 visits per year – a relatively low figure in international comparison.

11. An international comparison of Algeria’s health service delivery system shows that:

- Algeria has a lower bed-to-population ratio than other countries at a similar income level, however, the ratio is slightly above the regional average;
- The physician-to-population ratio is higher than in other comparable income countries, and higher than the MENA regional average; and
- In terms of service use, the admission rate and the ALOS are well below the averages found for lower-middle income countries. The general hospital occupancy rate of Algeria is far below the rate found in OECD countries.

## **B. ANALYSIS OF HEALTH FINANCING MECHANISMS AND EXPENDITURE LEVELS**

### **B.1 Basic Issues**

12. Health care financing involves raising, pooling and managing, and spending revenues to purchase services. In discussing health financing in Algeria, several factors are important to consider.

Governments finance health care for many reasons, including protecting the poor, assuring citizens financial protection from income losses and catastrophic expenses, internalizing the externalities associated with public and merit goods (including public health), and correcting for market failures both on the delivery side and in insurance markets. Private market insurance failure is one of the key reasons why governments finance personal health services, in particular to ensure efficient and equitable pooling of health risks, as well as to have the financial control to force efficiencies in the delivery of health services.

13. Health insurance is a preferred method for financing health services since risks are pooled over a large number of individuals and thus become predictable. Algeria pools risks for 90 percent of its citizens through the social security system. The MOHP provides services in principle to all Algerians, and acts in effect as the safety net for the remaining 10 percent of the population that is not affiliated with the social security system.

14. In terms of health insurance coverage, Algeria has a compulsory social insurance system (*sécurité sociale*) for all formal sector workers and their dependents.<sup>2</sup> The system is financed through a 34.7 percent payroll tax, of which 13 percentage points are earmarked for medical insurance. Approximately 3 million workers contribute to the system, covering 18 million individuals. In recent years, several categories of the population have been added to this system (handicapped, moudjahedines, students, apprentices and trainees, beneficiaries of the social safety net). All Algerians covered under the social security system (about 90 percent of the population) are eligible to obtain services in private health care facilities in addition to public facilities.

15. For services in private facilities, patients are reimbursed for 80 percent of the official tariff for outpatient services and 100 percent of the official tariff for inpatient services. The tariffs were set in 1987 and have not been renegotiated, but prices in the private sector have increased substantially since that time. This leads to increased out-of-pocket expenditures and a dual health system where only the relatively well-off can afford services in the private sector. Meanwhile, personnel at CNAS suggest that CNAS is double paying – since it provides a lump-sum payment to the MOHP (*forfait hôpitaux*) and also reimburses patients for drugs and private sector care.

16. As of January 2001, there is a formal provision in the law stating that individuals who are below the poverty line and are uninsured will be eligible for a health card entitling them to free health care at MOHP facilities. These cards are to be provided at the wilaya level by the Ministry of Social Assistance.

## **B.2 Revenue Sources for Financing Algeria's Health System**

17. Algeria finances its public health system through three main revenue sources: (i) Government budget (28%); (ii) CNAS (44%); and patients' out-of-pocket spending (28%). The MOHP manages the majority of these funds (including the *forfait hôpitaux* from CNAS) and uses them to sustain the government-owned service delivery system. The role of CNAS in health care financing is fourfold, it: (i) provides direct block payments (*forfait hôpitaux*) through the MOF to the MOHP to subsidize the public hospital system; (ii) reimburses public hospitals directly for certain services (cancer treatment, dialysis); (iii) finances treatment of patients abroad; and (iv) reimburses patients for the services and pharmaceuticals they receive in the private sector. Both CNAS and the MOHP have expressed a strong desire to implement a contracting system, so that the CNAS payments to the MOHP would be calculated as a function of patients treated rather than as a lump-sum payment.

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<sup>2</sup> Cf. Chapter 4.

### B.3 Levels and Trends in Health Expenditures

18. The discussion here is based on estimates of health spending since Algeria does not yet have National Health Accounts (NHA). The information provided below, as well as the international comparisons, should be interpreted with caution. Total actual health spending could only be estimated for 1998, with data on public spending on health estimated through 2001.

**Table 2: Total Health Expenditures in 1998**

	<i>MOHP Expenditure</i>	<i>Social Security</i>	<i>Total Public Expenditure</i>	<i>Private Expenditure</i>	<i>Total Health Expenditure</i>
Health expenditures (DZD)	34,075	45,682	79,757	29,306	109,063
Per capita health expenditures (DZD)	1,137	1,524	2,661	978	3,638
Per capita health expenditures (US\$)	20	26	46	16	62
Per capita health expenditures (PPP\$)	60	80	140	50	190
Health expenditures (public) as % of total government expenditures	3.9%	5.2%	9.1%		
Health spending/GDP Ratio	1.2%	1.6%	2.8%	1.0%	3.8%

Source: World Bank estimates, based on MOHP and Social Security data.

19. In 1998, Algeria spent 3.8 percent of GDP on health, some US\$62 per capita and US\$190 in international dollars (purchasing power parities) (Table 2). Public spending on health accounted for 2.8 percent of GDP, 73 percent of total health spending, and 9 percent of total government spending. The MOHP accounted for 31 percent of total health spending and 43 percent of all public spending. Out-of-pocket payments for direct purchase (i.e. outpatient drugs) and for cost-sharing accounted for 27 percent of all health spending.

20. Figures C1 through C3 in Annex C place Algeria's health financing in an international context. Algeria's total health expenditures, expressed as a percentage of GDP, are considerably lower than in other countries of a similar income level. However, Algeria's *public* health care spending is similar to countries at the same income level – and private health spending is far below the average.

21. Public spending on health in Algeria includes MOHP and social security spending – mostly by the *Caisse Nationale d'Assurances Sociales* (CNAS). As shown in Annex II, Table 3, the share of the public budget devoted to health declined by about 15 percent from 1993 to 1999 (from 10.3 to 8.7 percent). MOHP (recurrent and capital) spending declined by one percentage point while CNAS spending (recurrent) declined by almost two percentage points. As a share of GDP, MOHP and CNAS spending declined continuously from a combined level of 3.4 percent in 1993 to 2.6 percent in 1999 (Figure 2). MOHP real recurrent expenditures decreased continuously over the period from 1993 to 1999, while real capital expenditure increased during 1994 and 1995 before decreasing.

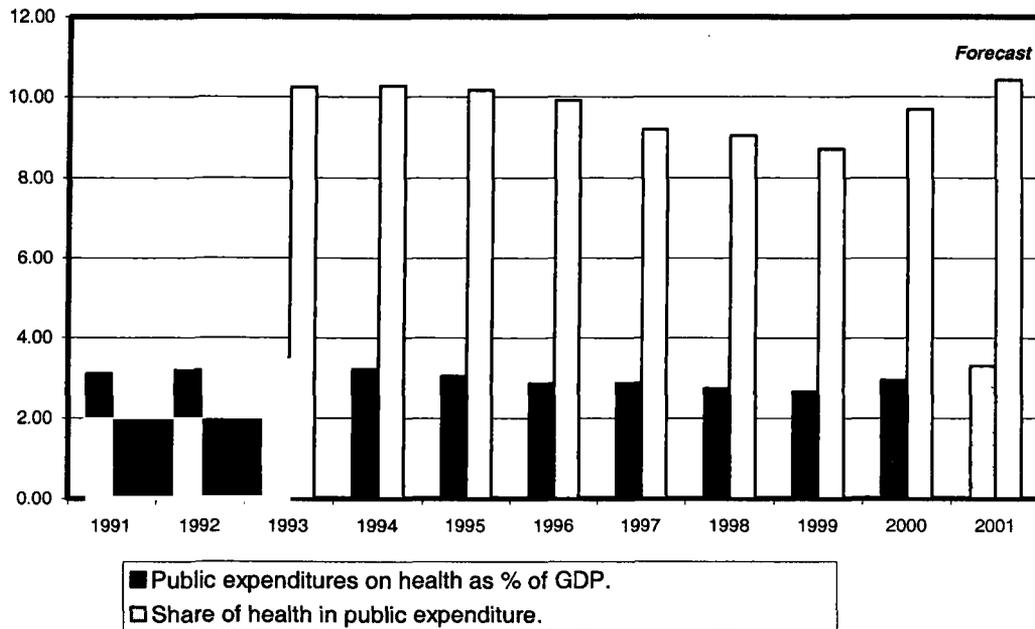
**Table 3: Summary Table of Public Health Expenditures**

Dépenses Publiques	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<i>In millions of current DZD</i>											
Etat	10,400	15,356	17,969	22,541	26,641	32,046	34,318	34,075	36,177	41,684	49,595
fonctionnement	9,770	14,299	16,389	20,310	23,368	28,544	31,426	30,460	33,121	35,144	37,194
équipement	630	1,057	1,580	2,231	3,273	3,502	2,892	3,615	3,049	3,000	9,500
CNAS	16,155	18,877	22,020	24,889	33,229	39,818	43,370	45,682	48,227	55,130	65,593
<i>Total dépenses publiques</i>	<i>26,555</i>	<i>34,233</i>	<i>39,989</i>	<i>47,430</i>	<i>59,870</i>	<i>71,864</i>	<i>77,688</i>	<i>79,757</i>	<i>84,404</i>	<i>96,814</i>	<i>115,188</i>
<i>Per capita expenditure in current DZD</i>											
Etat	405	582	665	815	942	1,122	1,182	1,155	1,208	1,371	1,611
fonctionnement	380	542	606	734	826	999	1,082	1,032	1,106	1,156	1,208
équipement	25	40	58	81	116	123	100	123	102	99	309
CNAS	629	716	815	899	1,175	1,394	1,493	1,548	1,610	1,814	2,131
<i>Total dépenses publiques</i>	<i>1,034</i>	<i>1,298</i>	<i>1,479</i>	<i>1,714</i>	<i>2,116</i>	<i>2,516</i>	<i>2,675</i>	<i>2,703</i>	<i>2,818</i>	<i>3,185</i>	<i>3,742</i>
<i>In millions constant 1991 DZD</i>											
Etat	10,400	12,442	13,146	12,839	11,812	11,308	11,367	11,782	11,509	13,009	15,179
fonctionnement	9,770	11,586	11,990	11,568	10,361	10,072	10,409	10,532	10,537	10,968	11,383
équipement	630	857	1,156	1,271	1,451	1,236	958	1,250	970	936	2,907
CNAS	16,155	15,295	16,109	14,176	14,733	14,050	14,365	15,795	15,343	17,206	20,075
<i>Total dépenses publiques</i>	<i>26,555</i>	<i>27,737</i>	<i>29,255</i>	<i>27,015</i>	<i>26,545</i>	<i>25,357</i>	<i>25,731</i>	<i>27,577</i>	<i>26,852</i>	<i>30,215</i>	<i>35,253</i>
<i>Per capita expenditures in constant 1990 DZD</i>											
Etat	405	472	486	464	418	396	391	399	384	428	493
fonctionnement	380	439	444	418	366	353	358	357	352	361	370
équipement	25	32	43	46	51	43	33	42	32	31	94
CNAS	629	580	596	512	521	492	495	535	512	566	652
<i>Total dépenses publiques</i>	<i>1,034</i>	<i>1,052</i>	<i>1,082</i>	<i>976</i>	<i>938</i>	<i>888</i>	<i>886</i>	<i>935</i>	<i>897</i>	<i>994</i>	<i>1,145</i>
<i>Per capita expenditures in US\$</i>											
Etat	22	26	29	23	20	20	20	19	18	20	22
fonctionnement	21	25	26	21	17	18	19	17	17	17	17
équipement	1	2	3	2	2	2	2	2	2	1	4
CNAS	35	33	35	26	24	25	26	26	24	26	30
<i>Total dépenses publiques</i>	<i>57</i>	<i>59</i>	<i>64</i>	<i>49</i>	<i>44</i>	<i>46</i>	<i>46</i>	<i>45</i>	<i>42</i>	<i>46</i>	<i>52</i>
<i>Per capita expenditures in PPP</i>											
Etat	51	65	66	63	63	60	60	60	57	64	76
fonctionnement	48	60	61	56	55	54	55	53	52	54	57
équipement	3	4	6	6	8	7	5	6	5	5	14
CNAS	79	80	81	69	79	75	75	80	76	85	100
<i>Total dépenses publiques</i>	<i>129</i>	<i>144</i>	<i>148</i>	<i>132</i>	<i>142</i>	<i>135</i>	<i>135</i>	<i>139</i>	<i>132</i>	<i>149</i>	<i>176</i>
<i>As % of GDP at mkt. Prices</i>											
Etat	1.22	1.43	1.55	1.53	1.35	1.27	1.26	1.16	1.14	1.26	1.42
fonctionnement	1.14	1.33	1.41	1.38	1.19	1.13	1.16	1.04	1.04	1.07	1.07
équipement	0.07	0.10	0.14	0.15	0.17	0.14	0.11	0.12	0.10	0.09	0.27
CNAS	1.89	1.76	1.90	1.69	1.69	1.58	1.60	1.56	1.51	1.67	1.88
<i>Total dépenses publiques</i>	<i>3.10</i>	<i>3.19</i>	<i>3.44</i>	<i>3.22</i>	<i>3.04</i>	<i>2.85</i>	<i>2.86</i>	<i>2.73</i>	<i>2.65</i>	<i>2.94</i>	<i>3.30</i>
<i>As % of Government Expenditure</i>											
Etat	NA	NA	4.60	4.88	4.52	4.42	4.06	3.86	3.74	4.17	4.49
fonctionnement	NA	NA	4.20	4.40	3.97	3.94	3.72	3.45	3.42	3.52	3.37
équipement	NA	NA	0.40	0.48	0.56	0.48	0.34	0.41	0.31	0.30	0.86
CNAS	NA	NA	5.64	5.39	5.64	5.50	5.13	5.18	4.98	5.52	5.94
<i>Total dépenses publiques</i>	<i>NA</i>	<i>NA</i>	<i>10.24</i>	<i>10.27</i>	<i>10.16</i>	<i>9.92</i>	<i>9.19</i>	<i>9.04</i>	<i>8.71</i>	<i>9.69</i>	<i>10.43</i>

Notes: 2001 figures for CNAS are projections.

The CNAS lump-sum transfer to the MOHP ( *forfait hôpitaux* ) is part of the MOHP recurrent budget, but is separated in this table.

**Figure 2: Public Expenditures on Health**



**B.4 Demographic Influences on Algeria’s Health Spending**

22. As discussed above, Algeria spends 3.8 percent of GDP on health, of which about 1 percent of GDP is private spending. Algeria’s spending is 2 percent of GDP lower than the average for comparable countries, and private spending is particularly very low. However, international comparisons are affected by demographic factors. Holding all other factors constant, a country with a high proportion of older persons will have to spend more in order to have a particular level of health services provided than would a country with relatively fewer older persons.

23. Demographic changes over time can also have a large impact on health spending. The Government is concerned that the aging of the population over time will cause a significant increase in health care resource requirements. If age and gender-specific relative expenditure data from the United States were applied to the Algerian population in 1995 and 2025, with an assumption of medium population growth, the resource requirements for Algeria would increase by 27.6 percent per capita due to the demographic shift.

**B.5 Allocation of Health Expenditures**

24. *Budget Process and Flow.* Pending a National Health Accounts study, only limited information is available concerning the flow of funds in the health system. The MOHP receives annual allocations from the MOF, divided into recurrent and capital budgets. Depreciation costs are not included in the recurrent budget – resulting in systematic underestimation of maintenance and replacement costs. Each year in June, budget requests are passed up the line from Public Health Directors in the wilaya to the MOHP and on to the MOF. The MOF then prepares and announces the following year’s budget.

25. For 2001, the MOHP recurrent budget comes predominantly from the MOF (61.5 percent of the recurrent budget). The lump-sum transfer from CNAS accounts for 36.4 percent. The remainder is composed of CNAS payments for services provided under specific conventions (0.5 percent), funds remaining from previous years (0.2 percent), and other receipts (1.4 percent). In addition to payments to

the MOHP, CNAS reimburses patients directly for private sector drugs and medical care, and provides health services directly to affiliates through a limited number of clinics.

26. *Geographic Distribution.* Tables C1 and C2 in Annex C provide the distribution of the MOHP recurrent budget by wilaya and region, respectively. The distribution by region is relatively equitable, with more financing going to the Southwest (2,617 DZD per capita) and the Southeast (1,757 DZD per capita) regions than to the other regions. Since these two regions are by far the most sparsely populated of Algeria's five regions, it is reasonable to assume that the per capita cost of providing health care there is higher than in the rest of the country. However, detailed analysis of this question has been done in the context of this review.

27. *Distribution by Functional Categories.* Annex II, Figure 3 presents the breakdown of MOHP recurrent expenditures (including the CNAS line-item transfer) for the years 1990 to 2001. Salaries are the largest part of recurrent expenditures, though their share has been declining steadily – from 77 percent in 1991 to 66 percent in 2001. In real terms, expenditures on salaries have fallen by more than 25 percent in this time period. This trend suggests that salaries have fallen or at least did not keep up with inflation and explains the increase in private sector activity by specialists, general practitioners, dentists and pharmacists over the last six years.

28. *Pharmaceutical products* represent the second largest share of recurrent expenditures. This share increased from 6 percent in 1990 to 16 percent in 2001. However, the amount spent on pharmaceutical products under current pharmaceutical policies is not sufficient to cover the drug needs of the public health system – shortages of drugs are quite frequent. There is no cost-recovery for drugs in public health facilities.

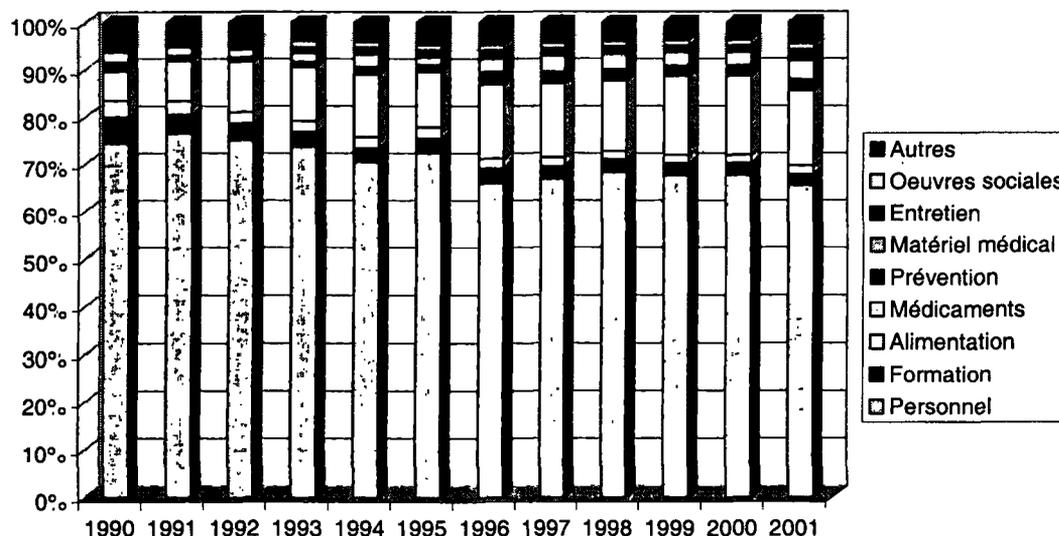
29. *Prevention.* The share of public direct recurrent expenditures for prevention is only 2 percent - this figure includes materials only, not salaries. Unfortunately, there is no information available to examine amounts spent on the different public health programs. This would be an important piece of information in order to make a link between certain health outcomes (IMR, MMR, etc.) and public expenditures on health.

30. *Maintenance* expenditures have averaged just two 2 percent of recurrent public expenditures from 1990 to 2001. This is one factor that explains the critical situation for medical equipment. At the end of 1998, the public health system had 20,418 items of medical equipment, of which 20 percent were broken or otherwise out of service pending repairs.<sup>3</sup> This high rate of equipment failure is related to the fact that after substantial investment in medical equipment in the 1960s, 1970s, and 1980s, the Government has not been able to replace equipment on a large scale, nor has it been able to put in a long-term maintenance plan.

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<sup>3</sup> The rate of equipment out of service is highest for anesthesiology and intensive care, where 35 percent of the items are not working.

**Figure 3: Recurrent Expenditures 1990-2001**



Source: MOHP data (see Table C3 in Statistical Annex)

31. *CNAS*. As mentioned above, most of the funds from CNAS are paid through MOF to MOHP for the *forfait hôpitaux* (21.5 billion DZD in 2001, up from 8.6 billion DZD in 1990). In addition to the financing of specific services through conventions and reimbursement of private sector patient visits, CNAS spends significant sums for treatment abroad – 1.8 billion DZD in 2000 (for 1,541 patients). This amount has decreased substantially since the mid 1990s, when it peaked at 10.4 billion DZD (for 4,639 patients). Most of treatment overseas money has been spent for treatment of cancer and cardiac problems. The majority of patients transferred abroad go to France, and in early 2001, the CNAS signed a convention with 18 hospitals in Jordan.

32. Both CNAS and the MOHP have expressed a desire to move their relationship towards one based on payment per contracted services. A joint commission has been working on this initiative, and MOHP has made initial steps, including pilot testing a *fiche navette* that records the different services that a patient receives within a health facility. Additionally, a proposed law has been prepared to allow private providers and service companies to enter into contracts with the public sector to provide health care and specific support services.

### B.6 Analysis of Financing Mechanisms and Expenditure Levels in Algeria

33. *The private health sector* could play a more prominent role in Algeria, particularly in terms of providing health care to better-off population groups and for non-essential health care services – thus freeing up public sector resources that could be redirected towards assuring access to an essential package of services. While current overall spending on health is on the low side, the public *share* of total spending is quite high – reflecting the fact that the private health sector is underdeveloped given the potential demand for it, and is not well integrated with the public system.

34. *Sustainability*. Both the CNAS and MOHP benefit packages are extensive and consumers face limited cost sharing, contributing to the lack of actuarial soundness to the system. As the population grows and the epidemiological transition to chronic diseases takes effect, the public system – both the

MOHP and CNAS – will be unable to financially sustain the coverage of these services unless changes are made in coverage and efficiency is improved (see next section).

35. Moreover, CNAS is already actuarially unsound in terms of its revenues and expenditures on several grounds including the insufficiency of revenues to cover CNAS enrollees and their dependents, and the block transfer from CNAS to MOHP for hospital care (*forfait hôpitaux*) which subsidizes the entire population, not just CNAS enrollees and their dependents. This results in a situation where CNAS enrollees potentially pay three times for health care: (i) through general taxes; (ii) through their social security contributions, and (iii) through out-of pocket payments at the point of service delivery.

36. MOHP sustainability is affected by the fact that it has accumulated large arrears of 13.5 billion DZD; 28 percent of this amount is for salaries, and an additional 40 percent is owed to pharmaceutical suppliers.

## C. EFFICIENCY, EFFECTIVENESS AND EQUITY OF PUBLIC HEALTH EXPENDITURES

### C.1 The Efficiency of Health Expenditures in General

37. Improving the cost-effectiveness of Algeria's health system means improving health outcomes per dinar spent. This can be accomplished by purchasing the most cost-effective mix of outcomes-interventions-services (allocative efficiency) that are "produced" at the lowest input cost (technical efficiency).

38. While sustainability issues require consideration of both revenues and expenditures, most revenue enhancement measures, except for user charges, have little or no effect on expenditures, and hence are not good policy instruments for improving system efficiency at the macro or micro level. Similarly, reducing expenditures is not equivalent to improving efficiency if, for example, one simply drops certain groups from coverage. However, if properly structured, cost containment and efficiency improvements can go hand in hand.

39. To improve efficiency in publicly-financed health care, governments can:

- Improve the efficiency of the service delivery system on both the demand and supply sides through the use of planning norms, cost-effective delivery mechanisms such as ambulatory surgery, and effective referral systems;
- Introduce incentive-based provider payment systems;
- Drop certain groups from coverage (i.e. those with incomes above a certain threshold, or groups receiving unwarranted public subsidies such as private sector expatriates);
- Reduce the services covered under public programs by dropping benefits that are not cost-effective (i.e. cosmetic surgery), and allowing the private sector to provide these services to individuals who want them;
- Requiring patients to share part of the costs for certain services that are often overused (i.e. pharmaceuticals); and
- Fully or completely privatize some health facilities.

40. While these policies are conceptually straightforward, they must be based on good underlying data and projections of their impact on health care access, cost, and quality.

## C.2 The Efficiency of Health Expenditures in Algeria

41. Prioritization of specific health services is essential if Algeria is to improve the efficiency of its health expenditures. As stated above, both the MOHP and CNAS currently cover a wide array of services and interventions while maintaining relatively low levels of cost sharing.

42. Coordination and payments between CNAS and the MOHP is complicated by the fact that there is no record of the numbers of patients insured by CNAS that are provided services in the MOHP system, nor of the costs of these services. Public facilities are unable to assess insurance eligibility at the point of service. As a result, CNAS payment to the MOHP is primarily in the form of a lump-sum payment; and the ability of CNAS to play role of a purchaser of health services – controlling prices and helping to set health care standards – is severely limited.

43. The capital budget is not efficient from the perspective of allocative efficiency. In 2001, of the 8 billion DZD allocated to new projects, approximately 3 billion is earmarked for the ongoing construction of a new CHU in Oran.

44. As stated in Section 2, the distribution of MOHP recurrent expenditures by region is relatively equitable, with more financing going to the Southwest (2,617 DZD per capita) and the Southeast (1,757 DZD per capita) regions than to the other regions.

45. **Health Facilities.** In general, because of Algeria's substantive investment in health infrastructure, geographic access to health facilities is very high, measured by the MOHP at 98 percent, but there are still potential problems of access due to shortages of drugs, trained personnel, and equipment. MOHP has implemented most of its public health programs through its primary health care infrastructure. The available data on the general hospitals suggest excess capacity as shown by an average occupancy rate of 42 percent (Table 1). To improve the efficiency of its infrastructure, the MOHP will need to rely more on the primary health care infrastructure. Unfortunately, there are no public spending data available for the primary health care sector, since the data for this sector are lumped in with the secondary health care sector.

46. We know very little in terms of the equity of health spending. The only data available are from a household survey conducted in 1995, showing that the poorest ten percent of the urban population spent about two percent of their income on health (including pharmaceuticals), while for the poorest ten percent of the rural population, the household expenditure share for health fell to about 1.4 percent.

47. The trend in expenditures by type of service and the trend in construction and utilization over the past ten years are described below:

- ***Tertiary Health Care Sector:*** Over the past 10 years the Government built 13 *Etablissements Hospitaliers Universitaires* (EHSs). In total, the tertiary health care sector consists of 13 *Centres Hospitaliers Universitaires* (CHUs) and 32 EHS, mostly located in the Central region of Algeria, with a capacity of 19,248 beds. The number of beds in CHUs has been reduced by about 21 percent over the past 10 years. In terms of spending, 32 percent of public health spending flows into the tertiary sector (a decrease of 11 percentage points since 1991). As for the utilization, both the CHUs and the EHSs have occupancy rates that are comparable to OECD countries (79 and 68 percent respectively).
- ***Secondary and Primary Health Care Sector:*** Expenditure data are only available for both sectors combined. Public expenditures flowing into the two sectors account for 68 percent of public spending for health (an increase of 11 percentage points over the past 10 years). We assume that most of the money goes into the general hospitals, that have a capacity of 33,319 beds – an increase of 9 percent over the past ten years. However, the occupancy rate for the

general hospitals is low (42 percent), and the rate has been declining over the past ten years. Reasons for this low occupancy rate could be that: (i) the referral mechanism from the secondary level to the tertiary level is not working; (ii) there are too many general hospitals; (iii) there is a shortage of adequately trained specialist physicians willing to work in the general hospitals; and/or (iv) the general hospitals are used as health centers.

48. In terms of the infrastructure in the primary health sector, the following should be noted: over the past ten years, the number of beds in public maternities increased by 14 percent (while the number of beds in private maternities declined by 33 percent); the number of health centers increased by 3 percent, and the number of *salles de soins* increased by 21 percent. However, 14 percent of the *salles de soins* are not functional. In general, the per capita outpatient consultation of 1.2 visits per year (public sector only) is very low, suggesting that people choose to go to the hospital (and preferably to tertiary care facilities) instead of going to the nearest health center or *salle de soins*. Possible explanations include a lack of drugs, equipment, and trained personnel at the primary care level, especially in rural areas.

49. **Staffing.** At the beginning of 1999, Algeria had 29,970 physicians, of which 29 percent were in the private sector. There were also 7,954 dentists, of whom 37 percent were in the private sector, 4,299 pharmacists (92 percent private), and 86,241 paramedical staff, including nurses and medical aides. Overall, there is 1 doctor and 2.9 paramedical staff per 1,000 inhabitants. The distribution of physicians heavily favors the Northern part of the country in general, and the Center Region in particular. The Center has 1.35 doctors per 1,000 inhabitants, compared to 0.64 in the Southeast. The wilayas of Oran, Constantine, and Alger account for 53 percent of public and 34 percent of private specialist physicians. In general, doctors are underutilized. MOHP statistics show that generalists see just 8 patients per day on average.

## D. POLICY RECOMMENDATIONS

### D.1 The Current Context for Reform

50. The MOHP and CNAS have developed plans for an important series of reforms that bear directly on the analysis in this study. These reforms reflect many of the themes discussed in the Health Sector Overview and Strategy Note (June 2000) and are in accordance with the recommendations in the Note. Specifically, the MOHP and CNAS are either in the process of, or plan to take measures to do the following:

- a) *Develop a health sector master plan*, to include the growing private sector. A masterplan would determine the optimal size and functions of the health care delivery system over the next decade – helping to rationalize the delivery system for the future needs of the Algerian population. This exercise includes public and private physical structures, equipment, and most importantly health care personnel. The MOHP has already begun the planning of a comprehensive master plan (*carte sanitaire*). The components of a masterplan at the *secteur sanitaire* level could be the following:
  - 1) Review existing norms and standards for health services.
  - 2) Develop revised norms and standards for health services in accordance with the Government's health sector strategy.
  - 3) Develop a model for number of beds and specialties based on demographic and epidemiologic data.
  - 4) Develop planning criteria for physical infrastructure by type of facility.
  - 5) Develop a model for work force requirements by type of facility and beds.

- 6) Develop a model for estimating recurrent cost requirements by type of facility and beds.
- b) *Revise existing treatment norms for health facilities and personnel*, as a function of a rational hierarchy of care based on the level of the facility.
  - c) *Develop and implement a contracting system between the MOHP and CNAS*, so that the MOHP can submit bills by medical act and by insured patient, instead of the current lump-sum transfer.
  - d) *Revise the reimbursement schedule for private health care* – this schedule has not been updated since 1987 and is considerably below market prices.
  - e) *Maintain and reinforce access to a package of essential health care services* – including preventive health care, contraception, and the most cost-effective curative services.
  - f) *Conduct an analysis of the pharmaceutical sector, rationalize drug consumption and reduce the rate of pharmaceutical inflation. Analysis of Spending on Pharmaceuticals.* The MOHP is spending 16 percent of its recurrent health expenditures on drugs, and the absolute level of spending on drugs has almost doubled over the past 10 years. Despite the large amount spent on pharmaceuticals, shortages of drugs are reported from all parts of the country at all levels of service delivery. As a first step to taking measures to rationalize drug consumption in Algeria, we strongly recommend an analysis of the pharmaceutical sector in the country, including spending, regulation, distribution, quality control, use of generics, and physician and consumer education.
  - g) *Carry out a National Health Accounts (NHA) study.* NHA provide information on the total (public and private) resources going into the health sector, their sources, and the types of services funded. There is currently not enough information on health care financing in Algeria to make comprehensive policy recommendations. The Government sent a team to a regional seminar sponsored and organized by the World Health Organization, the World Bank, and USAID in Bahrain in March 2001. It is important that the individuals involved in the study come from different stakeholders within the health sector, including the MOHP, the MOF, and the Central Statistical Office. NHA are not a one-time exercise, but rather should be institutionalized and updated every year – facilitating the rapid policy making for the health sector.

51. The World Bank strongly endorses these proposed reforms. They would make the Algerian health system both more efficient and effective. The envisioned reforms respond directly to the priority problems noted in this document. Nonetheless, implementation is likely to be a complex process, necessitating political and social consensus. A step-by-step approach to the reforms, accompanied by social dialogue, is most likely to succeed. The reforms – particularly a system of contracting – will also require the use of a number of specific approaches, including :

- *Accurate health information systems.*
- *Improved management capacity.*
- *Calculation of the real unit costs of delivery for specific health services.* Unit cost studies are essential in order to establish a realistic schedule of reimbursement rates under a

contracting system. Practical methodologies – including Activity-Based Costing are available for this type of study.<sup>4</sup>

- *A provider payment mechanism adapted to Algerian needs.* Possible methods include global budgets, line-item budgets, capitation, Diagnostic-Related Groups, and fee-for-service – or some combination of these. Each has different incentives for providers in terms of costs and service provision, and each has different requirements in terms of information (see Table C4 in Statistical Annex). To establish an efficient mechanism is a challenge, even in the most sophisticated OECD countries. Nevertheless, there is clear evidence of success (5 to 20 percent savings) in systems that: (i) separate provision of services from financing; (ii) have money follow the patient concepts; and (iii) use incentive-based provider payment mechanisms that encourage efficiency, clinical effectiveness, quality, access, and consumer satisfaction.

## D.2 Additional Recommendations

52. In addition to the substantial reforms proposed above, the following measures could be considered:

- *Establish a Maintenance and Replacement Plan for Equipment.* As shown above, the share spent on maintenance in general is very low (two percent of the recurrent public health budget). In addition, 20 percent of the equipment is out of service. Replacing or repairing the non-operational equipment and establishing a long-term maintenance plan is recommended.
- *Reduce Costs for Treatment Overseas.* Although reduced, the amount that CNAS spends for treatment abroad (mostly for cancer and cardiac problems) remains a major drain on the available budget. MOHP and CNAS should continue to work closely on agreements to finance investment in capacity to treat these conditions within Algeria.
- *Conduct an Analysis for Rationalizing the Benefit Package.* The Government should consider establishing a high level Commission to examine the current level of benefits covered by the system, and make recommendations for prioritization and exclusion of lower priority interventions. These benefits should then be periodically reviewed. The Commission should hold hearings and invite input from all relevant segments of society, including the medical establishment, and make use of the latest available evidence on cost-effectiveness.

## D.3 Cost Implications of the Recommendations

53. Nearly all of the actions proposed by the MOHP, and the additional recommendations made by the World Bank in this review, can be achieved at a moderate cost. The most expensive actions recommended are those that require the implementation of new systems – information systems, cost accounting systems, and provider payment systems. Each of these types of systems will require an investment in hardware, software, and training. There are also a number of studies – including NHA, benefits package analysis, an actuarial analysis of CNAS, and unit cost studies – that will require funding. Once these reforms are implemented, however, the investment in these activities will be more than repaid in terms of enhanced efficiency and improved health outcomes.

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<sup>4</sup> A working group in the MOHP has already conducted one such study, entitled “Système de calcul des coûts par la méthode des sections homogènes”.

#### **D.4 Possible Measures for the 2002 Budget Year**

54. The following measures, described above, are of very high priority and could all be implemented in the 2002 budget year:

- Carry out a National Health Accounts (NHA) study.
- Develop a health sector master plan.
- Revise the reimbursement schedule for private health care.
- Conduct an analysis of the pharmaceutical sector.
- Carry out studies to calculate the real unit costs of delivery for specific health services.
- Conduct an Actuarial Analysis of CNAS.
- Conduct an Analysis for Rationalizing the Benefit Package.

## ANNEX III: IMPROVING EFFICIENCY AND EQUITY IN SOCIAL PROTECTION

### A. OVERVIEW

1. Algeria's social protection system is largely managed by the Government and reflects its long-standing emphasis on human development. The system combines three different mechanisms: (i) labor market policies (for job or income security) and active labor market programs; both of which aim at reducing risks; (ii) contributive social security schemes (unemployment, pensions and health insurance), which aim at mitigating risks; and (iii) social assistance programs, including family allowances and targeted transfers to vulnerable groups, which aim at coping with risks. Expenditures are financed either through the general budget (mainly active labor market and assistance programs) or through payroll contributions levied on the affiliates to the social security system. Three Ministries oversee the system: Ministry of Labor and Social Protection, Ministry of Vocational Training, and Ministry of National Solidarity.

2. Sluggish economic growth has put pressure on the social protection system. Low economic growth during the 1990s is the greatest factor in the increase of poverty and unemployment in Algeria. To assist those who have been negatively affected by the economic and social problems, the Government relied on the social protection (SP) system (particularly active labor market policies and social security system) rather than on policies promoting economic growth. These additional objectives have led to inefficiencies in SP programs and have jeopardized their financial sustainability. According to international experience, sustainable economic growth is a prerequisite for reducing poverty and unemployment. Only in an environment of sustainable growth can the SP system provide additional tools for poverty and vulnerability reduction through employment opportunities, labor insurance and assistance programs.

3. Government spending on SP has declined during the last decade while the number of beneficiaries increased, suggesting both increases in poverty and unemployment. Between 1993 and 2000, public spending on SP programs declined from 11 percent to 9 percent of GDP (Table 1 and Figure 1), mainly due to lower spending on employment programs and assistance programs for wage earners. This decline in spending, however, was associated with a near doubling in the number of beneficiaries, implying that the system is providing greater coverage; currently, the SP programs support about 9 million people compared to about 5 million in 1993. The increase in the number of beneficiaries reflects the growing demand for public services programs. Between 1988 and 2000, the incidence of poverty increased from 8 percent to 20 percent of the population, and the unemployment rate increased from 15 percent to 29 percent. There are no studies of the welfare impact of the system, though it is likely that it has contributed significantly to contain poverty.<sup>1</sup>

4. Current levels of social protection spending could be adequate if micro efficiency and equity improved. Given the increase in poverty in Algeria, it is important that programs focus specifically on the poor. This is only marginally the case with the current SP programs. Many programs: (i) have declined in coverage due to budgetary constraints; (ii) are funded on an ad-hoc annual basis; (iii) are poorly coordinated; and (iv) are not reaching the genuine poor due to poor governance. In addition, the social security system is facing financial unsustainability. These increased strains on the SP system make efficiency and equity issues even more apparent.

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<sup>1</sup> CENEAP prepared an evaluation of the beneficiaries of the social safety net programs in 1999, but the narrow focus of this study does not permit an evaluation of the impact of these programs on poverty.

**TABLE 1: SOCIAL PROTECTION SYSTEM: TRENDS IN EXPENDITURES AND BENEFICIARIES (1993-2000)**

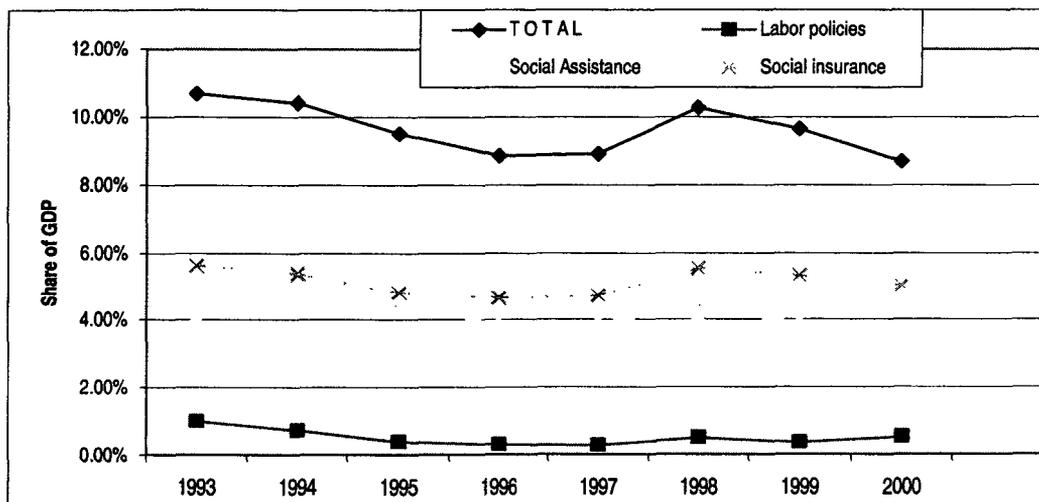
	1993	1994	1995	1996	1997	1998	1999	2000
Employment Programs	% of GDP							
	1.3%	1.0%	0.6%	0.5%	0.5%	0.6%	0.6%	0.6%
	No. of beneficiaries ('000)							
	276	307	321	654	477	533	545	651
Social Security 1/	% of GDP							
	5.6%	5.4%	4.8%	4.6%	4.7%	5.5%	5.3%	5.0%
	No. of beneficiaries ('000)							
	500	500	590	660	780	910	960	990
Assistance programs 2/	% of GDP							
	4.1%	4.3%	4.3%	3.9%	4.0%	4.3%	4.0%	3.1%
	No. of beneficiaries ('000)							
	4,000	4,054	4,080	5,099	6,435	7,475	7,163	7,052
Total	% of GDP							
	11.0%	10.7%	9.7%	9.1%	9.1%	10.4%	9.9%	8.8%
	No. of beneficiaries ('000)							
	4,776	4,833	4,955	6,413	7,692	9,896	8,668	8,693

1/ Excluding health insurance.

2/ Number of beneficiaries excludes the moujahedines.

Source: Ministry of Labor and Social Protection.

**FIGURE 1: PUBLIC EXPENDITURES ON SOCIAL PROTECTION DECLINED AS SHARE OF GDP**



Source: Ministry of Labor and Social Protection.

5. Active labor market policies have been used, unsuccessfully, as a substitute for macroeconomic growth policies, such as expanding job opportunities given the recent low job creation rates. Most active labor market programs target first-time job seekers (less than 35 years old), while there is no comprehensive active program for older workers (heads of households) who often lose their jobs as a result of enterprise restructuring or closure (i.e., reinsertion and retraining programs). No country has efficiently generated permanent jobs through active labor market programs. Although the programs in Algeria are small and have reached only a very small fraction of the unemployed, they are distortionary at the macroeconomic level because they increase the cost of labor. Although it is desirable to stabilize workers' consumption, this should not be done through restrictions in labor adjustment. For instance, the existing programs have emphasized wage subsidies which have only a marginal impact on employment and can be costly. Instead they should focus on strengthening vocational training programs, job services programs, public works for the unskilled poor and sustainable micro-credit programs.

6. Several funds within the social security system are facing financial problems resulting, in part, from misallocation of reserves to poor investments or unfunded social assistance programs. Benefits of the pension and health schemes are currently disconnected from labor contributions. While the unemployment insurance fund is currently solvent, it is poorly designed and its management practices are likely to jeopardize its medium-term financial sustainability.

7. Most problems in Algeria's social assistance programs are related to poor targeting and poor governance. Since programs have not been designed within an overall SP framework in mind, overlaps and coordination problems are pervasive and reduce efficiency and effectiveness at the micro level. The share of expenditures on social assistance programs has declined from 4 percent of GDP in 1993 to 3 percent of GDP in 2000, and assistance programs targeted to the poor have declined from 3 percent to 0.5 percent of GDP (Figure 1). Although this decrease is mainly due to the elimination of consumer food subsidies, the Government still needs to consolidate and reallocate resources towards programs that target and reach the real poor. At this stage, the Government does not have adequate assistance programs to support poor families with children.

8. Based on international experience, the social protection system should have a dual role, it should (i) contribute to poverty alleviation by helping those who are in the greatest need (the *risk coping* function of social protection); and (ii) contribute to human development by preventing the non-poor from becoming vulnerable (the *risk prevention* and *risk mitigation* aspects of social protection). While the Algerian social protection system already combines these roles to a certain extent, and overall expenditures are adequate by middle-income country standards, macro and micro efficiency needs to improve in order to achieve better outcomes, particularly in the presence of growing unemployment and poverty. In the process of transition to a more diversified and competitive economy, demands on the social protection system in Algeria are likely to increase. Addressing these demands will involve targeting expenditures in social protection equivalent to 4 percent to 5 percent of GDP (excluding the social security system which should be self-financed), while reallocating resources towards more cost-effective interventions, improving coordination across programs, and better targeting.

9. The Government has engaged in a reform process that seeks to reevaluate the functions of the social protection system in order to improve efficiency, equity and outreach. Algeria is already introducing some reforms which can move the economy from a dominant public sector to one where the private sector becomes the engine of growth. These reforms need to be supplemented by a social protection system which can accelerate the process of transition to a dynamic economy while supporting those in need. To this end, the Government had asked the World Bank to help develop a Social Protection Strategy that reviews Algeria's social protection programs, evaluates program costs and effectiveness, and proposes an alternative mix of interventions that could generate higher welfare gains at lower costs. In February 2000, a Social Protection Strategy Note was prepared by the Bank and discussed with Government officials who endorsed the main conclusions.<sup>2</sup> This Annex builds on the findings of the Social Protection Note, contributes to the public expenditure reform process by evaluating the budgetary expenditures, reviews the efficiency of programs and identifies reform measures for improving the efficiency and equity of the system. This Annex is organized by the typology of social protection interventions. Section B discusses employment programs, while Sections C and D evaluate the social security system and social assistance programs, respectively. Each section analyses the issues of corresponding programs and discusses short- and medium-term policy recommendations. In respect to programs managed by the Ministry of Vocational Training, this Annex discusses mainly in-service training, while pre-employment training is discussed in Annex I (on Education).

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<sup>2</sup> See "Algeria: Social Protection Strategy Note," World Bank, March 2000.

## **B. LABOR MARKET POLICIES**

### **B.1 Employment Trends and Labor Policies**

10. As described earlier in this review, low economic growth and a shrinking public enterprise sector have aggravated unemployment. Since the late 1980s, employment growth (about 0.2 percent p.a.) has been significantly below labor force growth (about 3 percent or 300,000 new workers p.a.) . Rapid population growth, combined with increasing labor force participation rates (particularly women) in recent decades, indicate that Algeria will continue to experience severe supply-side pressures in the labor market for the foreseeable future. A shrinking economy, concurrent with an expanding labor force has led to slow growth of employment in the formal sector and rising unemployment, especially among new entrants to the labor force; unemployment reached 29 percent in 2000, compared to 17 percent in 1985 (this rate does not capture the expansion of the informal sector). Unemployment is highest among the poor, urban youth (ages 16-24) and women. Many entrants in the labor force are ill equipped for the current labor market. Despite revisions in the investment and commercial codes and the opening up of the economy, foreign investment has not increased, partly due to uncertainties surrounding the outlook for the economy and the unstable environment. In 1999, only 1,000 new investment projects were presented to the APSI by the private sector (compared to 1,100 in 1998) creating only 29,000 new jobs (less than 10 percent of jobs required each year). It is expected that the demand for labor will decrease further in the near future as public enterprises strive to improve productivity. This decrease in number of new jobs, combined with deteriorated living standards and acute housing crisis, has led to severe discontent and underscores the urgency of sustainable employment generation.

11. Prohibitive social charges and inflexible labor markets impede formal employment creation. Non-wage labor costs arising from a variety of pay-roll contributions/taxes increase the wage bill by approximately 40 percent. Revenue that is generated in this way by the social security system is used not only for affiliated worker benefits, but also to finance social programs for those who are not affiliated. After the unemployment insurance scheme was introduced, it became easier for firms to reduce employment levels, but laying-off workers remains a lengthy and costly process for employers. This discourages private employers from hiring even when there are prospects of increased production.

12. The safety net provided by public sector employment is being dismantled as the Government is reducing the size of its civil service and restructuring public enterprises. Public employment has traditionally been dominant, accounting for over 50 percent of jobs, including more than 75 percent in the manufacturing sector, and used as a social protection mechanism (Table 2). Under the public enterprise restructuring program, 514,000 employees have been retrenched between 1990 and 1998. Much of the restructuring of the large public sector enterprises remains to be done, therefore, pressure on the labor market is likely to increase due to additional layoffs. Moreover, the demand for labor will decrease further as public enterprises strive to improve productivity. Based on preliminary projections of labor force growth and its demographic structure, it is expected that even with 4 percent real GDP growth p.a. , the unemployment rate would still increase to about 34 percent by 2006.<sup>3</sup>

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<sup>3</sup> This calculation is based on the assumption that elasticity of labor demand to GDP growth is 0.5.

**TABLE 2: EMPLOYMENT PROGRAMS: COST AS % OF GDP AND NUMBER OF BENEFICIARIES ('000)**

	1993	1994	1995	1996	1997	1998	1999	2000
ESIL	0.02%	0.03%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
	40	58	71	69	90	76	66	66
CPE	-	-	-	-	-	0.02%	0.03%	0.04%
	-	-	-	-	-	5	8	8
ANSEJ	Na.	Na.	Na.	Na.	Na.	0.08%	0.08%	0.08%
	9	6	9	18	3	15	20	22
Public Works	0.82%	0.57%	0.27%	0.19%	0.22%	0.24%	0.21%	0.18%
				315	130	141	143	139
TUP-HIMO	-	-	-	-	0.04%	0.05%	0.05%	0.04%
					5	6	8	4
IAIG	0.82%	0.57%	0.27%	0.19%	0.17%	0.19%	0.16%	0.14%
				315	125	135	135	135
Vocational Training	0.30%	0.29%	0.23%	0.23%	0.19%	0.24%	0.23%	0.22%
	226	243	241	251	254	264	270	380
Others	-	-	-	-	-	0.10%	0.10%	0.10%
Total	1.3%	1.0%	0.6%	0.5%	0.5%	0.6%	0.6%	0.6%
	276	307	321	654	477	501	508	616

Source: Ministry of Labor and Social Protection.

13. The increase in unemployment, particularly in urban areas, is partly responsible for the increase in urban poverty during the 1990s. In 1995, 44 percent of the urban poor were unemployed, compared to 29 percent of the non-poor. The changes in the characteristics of unemployment are of great concern from a poverty perspective because unemployment is (i) spreading to older adults who are heads of household – their share in the unemployed increased from 30 percent in 1990 to 44 percent in 1995; and (ii) increasing among low-skilled labor.<sup>4</sup>

## B.2 Employment Programs

14. In response to high and rising unemployment, a variety of employment programs have been implemented, particularly in the second half of the 1990s, but they reached only a small number of unemployed. These active labor market programs include wage subsidies, labor intensive public works, micro-finance programs, job placement services and vocational training. A large part of these programs (except IAIG and TUP-HIMO) target first-time job seekers (less than 35 years old). There are no adequate active programs for reinsertion or retraining for those who lose their jobs as a result of enterprise restructuring or closure. While the number of beneficiaries has more than doubled, budgetary expenditure for these active labor market programs has been reduced from 1.3 percent of GDP to 0.6 percent of GDP. Nevertheless, Algeria's spending on these programs is consistent with international standards (i.e., Portugal 0.8 percent; Spain 0.7 percent; Hungary 0.4 percent). Similar to other countries, Algeria's employment programs are often thinly spread (only about 20 percent of the unemployed actually benefit from them), do not reduce unemployment, and involve high administrative overhead costs. Similar to income support programs for the unemployed, the public works programs (particularly IAIG) have been the most efficient both in terms of coverage and costs, while wage subsidies and micro-financing schemes are reaching only a small fraction of the unemployed, and are associated with substantial deadweight and substitution effects.

15. Based on the experience in other countries, unless objectives and target groups are well defined, active labor market programs are not an efficient mechanisms for addressing unemployment issue in a sustainable manner. International experience and research suggest that active labor market policies should not attempt to substitute for macroeconomic and structural reform. These reforms constitute the

<sup>4</sup> See "Democratic and Popular Republic of Algeria: Growth, Employment and Poverty Reduction," World Bank Report # 18564-AL; January 1999.

most efficient mechanism for reducing unemployment; in their absence, the impact of active labor market policies can be negligible and even counterproductive. Indeed, resources tend to be diverted towards programs without appropriate social rates of return. The impact and cost-effectiveness of most active labor market programs depends not only on their design, but also on the overall macro and labor market framework in which they are designed (Box 1).

### Box 1: International Experience in Active Labor Market Programs

Many interventions in the labor market are clustered under the title "active labor market programs" (ALMPs). Such programs (i) may lead to direct job creation through a new public works scheme; (ii) help the unemployed fill existing vacancies through re-training to meet the new job requirements; and/or (iii) improve the functioning of the labor market through employment information and labor offices. Expenditures on ALMPs vary as do the analytics of these programs, for example, public works represent a demand-side intervention, training represents a supply-side intervention, while labor market intermediation can be seen as an attempt to bridge both sides of the labor market.

In almost all OECD countries, training for the unemployed is "the largest category of active programs and is often perceived as the principal alternative to regular unemployment benefits". In many countries, in fact, training - for those laid off *en masse*, for the long-term unemployed, and for youth - accounts for over 50 percent of the expenditure on active labor market programs. This is followed by expenditures on employment services and public works programs. Countries generally spend less than 10 percent of active labor market programs on micro-enterprise development or wage subsidies. The results of evaluations of ALMPs from OECD countries are summarized programmatically:

- *Public works* can temporarily help the more disadvantaged groups (older workers, the long-term unemployed, those in distressed regions) as a poverty/safety net program, but they are ineffective instruments as an escape route from permanent unemployment. Program participants are less likely to be employed in an unsubsidized job, and they earn less than individuals in the control group.
- *Job search assistance* has a positive impact and is usually cost-effective relative to other ALMPs. Programs that have yielded positive results have generally been implemented under favorable macroeconomic conditions. However, job search assistance does not seem to significantly improve either the employment prospects or wages of youth.
- *Training for the long-term unemployed* can help when the economy is improving. Small-scale, tightly targeted on-the-job training programs, often aimed at women and older groups, offer the best returns. However, the cost-effectiveness of these programs is generally disappointing. The real rate of return is rarely positive, and they are no more successful than job search assistance programs in terms of post-program placement and wages. A caveat here is that job search assistance may not be a direct substitute for training as it may cater to different groups of the unemployed.
- *Retraining for those laid off en masse* usually has little positive impact and, as in case for the long-term unemployed, it is more expensive and no more effective than job-search assistance. Again, job search assistance may not be a direct substitute for retraining, as the target groups may be somewhat different.
- *Training for youth* generally has no positive impact on employment prospects or post-training earnings - it clearly cannot make up for the failures of the education system. Taking costs into account, the real rate of return of these programs in both the short- and long-run is usually negative.
- *Micro-enterprise development* programs are usually taken up by only a small fraction of the unemployed and are associated with high deadweight and displacement effects. The failure rate of these businesses is quite high. As in the case of training for the long-term unemployed, assistance targeted at particular groups - in this case, women and older individuals - seems to have a greater likelihood of success.
- *Wage subsidy* programs are unlikely to have a positive impact. They have substantial deadweight and substitution effects, and the wage and employment outcomes of participants are also generally negative as compared to a control group. Careful targeting can reduce, but not eliminate, substitution and deadweight effects, and further controls may be necessary to ensure that firms do not misuse this program as a permanent subsidy program.

Source: (OECD, 1994), Dar and Tzannatos (World Bank, 1999).

### Wage subsidies

16. Algeria has two types of wage subsidy programs: (i) *Emploi salarié d'initiative local* (ESIL) introduced in 1990; and (ii) *Contrats Pre-Emploi* (CPE), introduced in 1998.<sup>5</sup> The main objectives of these two schemes are to: (i) help first time job seekers find employment; and (ii) provide recurrent

<sup>5</sup> ESIL is directly managed by the Ministry of Labor and Social Protection (MTPS) and CPE is managed by the Agence de Développement Social (ADS) under the MTPS.

budget subsidies to local governments and public agencies that cannot hire new permanent staff and have insufficient budgets. ESIL targets young unskilled workers between the ages of 19 and 35 years, and does not apply to jobs in public enterprises. CPE is meant for graduating students and deals with employment in public and private enterprises. Both programs cost about 1 percent of the total social protection budget or 0.1 percent of GDP.

17. Wage subsidy programs have been inefficient in providing the unemployed population entry into the labor force, and have been used by employers (mainly public sector) as a permanent subsidy program. Although program effectiveness has not been properly evaluated, there is evidence that employers utilize the subsidy schemes to hire the workers they need, but cannot employ in the long term due to insufficient budgets. As a result, the net job creation effect of these programs has been negligible (particularly for civil service and local governments); between 1990 and 2000, over 500,000 jobs were financed in through wage subsidies, but the retention rate at the end of the subsidy program was a low 5 percent for both ESIL and CPE.<sup>6</sup> This situation implies that rather than increasing demand for labor, the subsidy is operating as a simple transfer mechanism to workers and employers, which ultimately does not generate aggregate welfare gains. Since providing the subsidy causes distortions associated with mobilizing resources to finance the subsidy, net welfare gains are likely to be negative. Based on international experience, wage subsidies can be justified as a mechanism to increase/update workers skills in the presence of structural unemployment, but these types of programs are rarely increase welfare, and are unlikely to be cost-effective instruments in reducing unemployment.

18. Local governments and ministries identify their needs irrespective of regional unemployment. As a result, most jobs have been created in the public sector. In the case of CPE, 70 percent of the jobs are in the civil service and 15 percent are in public enterprises. Graduate students apply to the program at the local level, and lists of applicants are then submitted to potential employers, mainly public sector institutions. Moreover, given that CPE beneficiary costs are covered by the Government during the first year, there is little incentive for the employee to increase their productivity. In 2001, the Government began to address these issues; CPE is only used for employment activities in the economic sectors, while the civil service is no longer eligible for this program.

#### **Box 2: Social protection programs target women**

There is no major beneficiary gender gap between the active labor market programs and the assistance programs. In response to rising unemployment, active employment programs fairly equally target male and female first-time job seekers (40 percent of the ESIL and IAIG beneficiaries are women). To ensure that women will continue to benefit from these programs, certain social sector activities are eligible for assistance; for instance, most local community activities paying wages through ESIL or IAIG target women employed as social assistance workers in the *cellules de proximité*, or as school teachers. As for assistance programs, 50 percent of AFS beneficiaries are also women. According to 1995 household data, the gender of a head of household is not a significant determinant of poverty: 93 percent of poor households are headed by male and 7 percent by female, to be compared with 91 percent and 9 percent, respectively in the total population. Since women may be under-represented in the national surveys as heads of poor households, further research would be required to ensure that women are not trapped by poverty.

#### **Public works**

19. The Social Development Agency (ADS) was established in 1996 as a semi-independent agency under the Ministry of Labor and Social Protection. The Agency has recently been transferred to the Ministry of National Solidarity. ADS is responsible for two public work programs: (i) *Indemnités pour activités d'intérêt général* (IAIG), introduced in 1994 as a poverty reduction program; and (ii) *Travaux d'utilité publique à haute intensité de main-d'oeuvre* (TUP-HIMO), introduced in 1997 as an employment

<sup>6</sup> ESIL benefits about 150,000 students per year for a period of four to six month. This is equivalent to about 50,000 student /year. But only 2,000 permanent job have been created per year. For CPE, during 1998-2000, about 85,000 graduates have presented themselves as candidate for the program; 18,000 have benefited from the program and only about 1,000 have been kept by the employer once the subsidies ended.

program. Both programs target unskilled, unemployed labor force and, despite some leakages, are the most effective and efficient employment programs in Algeria in terms of coverage and cost. The cost of these programs adds up to about 0.2 percent of GDP, which equals nearly one-third of the total cost of employment programs, and the number of direct beneficiaries approximates 140,000 individuals, or about 6 percent of the unemployed.

20. IAIG is an assistance mechanism which aims at compensating the unemployed poor following the elimination of consumer food subsidies. <sup>7</sup> IAIG provides cash transfers through public works (normally of limited duration) using self-targeted mechanisms to reach the poor, i.e., those who have no employment and are willing to work for eight hours a day at almost half the minimum wage on labor intensive activities (or DA 3,000 per month on a full-time equivalent basis). In 2000, the program reached 132,000 individuals at over 10,000 work sites in both rural and urban areas.

21. TUP-HIMO has three objectives: (i) providing employment to unskilled workers; (ii) developing public infrastructure; and (iii) promoting private sector development. The program is targeted to the unskilled unemployed (poor and non-poor), and has generated on average about 6,000 jobs per year between 1997 and 2000. Public works needs are usually identified at the local level and jobs are advertised in local newspapers or posted in public places. Over 30,000 applications per year are received and over 1,300 micro-enterprises (*tâcherons*) are hired to implement the public works. TUP-HIMO activities have not been highly labor intensive (labor is 40 to 50 percent of total cost), particularly since the private contractors have to pay high social charges (34 percent of the gross wage bill) and transport costs.

22. The main problems for IAIG are related to poor targeting mechanisms and inadequate eligibility criteria. Since the eligibility criteria are not always enforced (particularly the wage level and the labor-intensity of the work), targeting of the program is not satisfactory, and as a result there are leakages and sometimes overlaps with other employment programs. These overlaps are mainly due to similar eligibility criteria and objectives (i.e. ESIL and IAIG, see Box 3). Given the broad definition of eligible activities, IAIG jobs often effectively pay the minimum wage or more, and finance a broad range of services that are not labor intensive (e.g., clerical, social assistance, educational activities). Preliminary evaluations suggest that over 50 percent of the beneficiaries have other sources of income and, therefore, are not eligible according to the selection criteria.<sup>8</sup> This is mainly a governance problem, since in some wilayas, the criteria of eligibility are not enforced and the lists of beneficiaries are inaccurate and non-transparent. Due to the lack of criteria enforcement, activities under IAIG, ESIL and TUP-HIMO are sometimes very similar. Although originally the TUP-HIMO program was expected to complement the existing IAIG and to create short-term jobs for unskilled unemployed paying the minimum wage, in practice TUP-HIMO duplicated the IAIG, particularly in infrastructure activities (i.e., roads, agriculture and hydraulic). An additional problem related to targeting results from the clause that only one member per household can benefit from the IAIG program. If the poverty line is close to DA 1,000 per month per person, a family of five individuals would require DA 5,000 per month. Yet, since only one individual is allowed to access the program, the family would remain poor with an income of DA 3,000 per month.

23. Since there are no time limits to assignments, IAIG programs are used to create permanent jobs, particularly for local administration. Similar to the ESIL, the IAIG programs provide to some extent continuous employment for unemployed youth instead of providing income support to the able-bodied poor without alternative employment. Since there are no clauses regarding the duration of the assignments, several IAIG beneficiaries have, in fact, obtained a permanent position within the public sector (particularly local governments). Additionally, over 20 percent of IAIG beneficiaries have been

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<sup>7</sup> To compensate for consumer food subsidies in addition to IAIG, a cash transfer system targeted to the poor elderly and the handicapped was also introduced - the *allocation forfaitaire de solidarité (AFS)* (see section on Social Assistance).

<sup>8</sup> See *Rapport d'audit opérationnel de l'Agence de développement social*, 2000; et *Etude sur l'Harmonisation et la Gestion des Aides de l'Etat*, Ecotechnics, 1999.

educated beyond high school, while according to the poverty profile, most of the unemployed poor have less than a secondary education.

24. Public works programs are not targeting the wilayas with the highest shares of poor and unemployed. While initially quotas were intended to be allocated across wilayas in accordance with unemployment and poverty rates for both IAIG and TUP-HIMO, actual distributions are inequitable, and the selection process needs to be streamlined in order to improve efficiency and transparency. Inequitable distribution is mainly due to the lack of (i) information on regional poverty and unemployment; and (ii) an accurate poverty map. As a result, quotas across wilayas for both programs are allocated based on local government requests, instead of the level of poverty and unemployment in the wilayas. Moreover, there are no formal monitoring systems to evaluate the program's impact on unemployment and poverty. Finally, several wilayas continue to suffer from security issues, and operations are, as a result, limited in scale with modest national impact.

25. As regards TUP-HIMO, projects are not financially sustainable, private contractors are overly regulated and there are consistent delays in payments. Given that public works are legally owned by government agencies and selected by sectoral ministries, once projects are completed, local communities are not responsible for their maintenance nor for making arrangements to ensure that beneficiaries are involved in their selection. In order to promote labor-intensive activities, a target of 60 percent labor costs is imposed upon contractors, regardless of the type of activity. In practice, however, because transport and equipment costs are high, the average share of labor is actually estimated to be less than 50 percent of a total project's cost. Finally, since the extent of collaboration between agencies in ministries of equipment, agriculture, and labor, social protection and population (MTPSFP) at the wilaya level varies, in some cases the local administration does not submit proper documentation to ADS for payment which, in turn, leads to significant delays in payments to contractors.

**Box 3 : Main features of ESIL, CPE, IAIG & TUP-HIMO**

<b>ESIL</b>	<b>CPE</b>	<b>IAIG</b>	<b>TUP-HIMO</b>
<b>Objective :</b> help insert unskilled, first time job seekers into the labor market.	<b>Objective :</b> help insert graduating first time job seekers into the labor market.	<b>Objective :</b> provide temporary income support to poor unemployed.	<b>Objective :</b> provide temporary employment for unqualified, unemployed workers who either lost their job or are first time job seekers.
<b>Beneficiary:</b> unqualified, unemployed youth (19-35 years old). Large share of beneficiaries have completed the apprenticeship in VT centers.	<b>Beneficiary:</b> unemployed university and technical school graduates (19-35 years old). Large share of beneficiaries are <i>Technicians Supérieurs</i> from VT centers.	<b>Beneficiary:</b> heads of poor households, all ages, with no income.	<b>Beneficiary:</b> unemployed workers, no conditions on age, family status or income.
<b>Benefit amount :</b> DA 2,500 per month.	<b>Benefit amount :</b> DA 6,000 per month for university graduate students; DA 4,500 per month for technical institute graduates for one year on-the-job-training .	<b>Benefit amount :</b> DA 3,000 per month.	<b>Benefit amount :</b> market wage, DA 8,000-10,000 per month. With the increase in minimum wage in 2001, TUP-HIMO's wage is DA 10,000 - 12,000 per month.
<b>Length :</b> six months on average.	<b>Length :</b> one year with six months possible extension provided that employer provides a one year contract. Subsequently the subsidy is reduced by 33 percent and remuneration is expected to increase to at least 80 percent of that of a regular worker.	<b>Length :</b> 12 months on average.	<b>Length :</b> between 4-6 months.
<b>Activities :</b> administration (including local collectivities) and economic sectors (particularly public enterprises).	<b>Activities :</b> administration (including local collectivities) and economic sectors (particularly public enterprises)	<b>Activities :</b> public works in infrastructure and social activities (including local collectivities and <i>cellules de proximité</i> ).	<b>Activities :</b> public works in infrastructure identified by line ministries through <i>force accounts</i> in agriculture, roads and hydraulics.

### **Micro-Financing Schemes**

26. In recent years, Algeria introduced two micro-financing schemes: (i) The *Agence National de Soutien à l'Emploi des Jeunes* (ANSEJ) which manages a micro-enterprise program created in 1997 to reduce unemployment (for projects costing up to DA 4 million or US\$55,000);<sup>9</sup> and (ii) ADS which manages a micro-credit program created in 1999 to reduce poverty (credit range is DA 50,000 to 350,000, or US\$600 to US\$4,000)<sup>10</sup>. The target population is mainly first-time job seekers aged 19 to 35 years, though the ADS micro-credit program is extended to all age groups and to those who have lost their jobs. More specifically, they provide subsidized financing for activities in the formal (ANSEJ) and informal (ADS) sectors.

27. The impact of these micro-financing schemes on unemployment is negligible. They reach only 1 percent of the unemployed and create only about 23,000 jobs a year, while the program target is 100,000 jobs per year. They cost about 0.1 percent of GDP per year, but the average cost of these schemes is high, for example, ANSEJ creates about 20,000 jobs each year at an average cost of DA 580,000 (US\$8,000).

<sup>9</sup> ANSEJ program includes (i) interest free loans from the *Fonds National de Soutien a l'Emploi des Jeunes* (FNSEJ) which correspond to 15 percent of the total investment; (ii) subsidized loans from *Banque Nationale d'Algérie* (BNA) which correspond on average to 65 percent of the total investment; and (iii) the beneficiary is required to provide funding from his own resources for 20 percent of the investment.

<sup>10</sup> ADS provides credit (up to 90 percent of the cost of the investment) at highly subsidized interest rate (2 percent p.a.) through public banks for acquisition of equipment or raw materials. Initially, the fund was endowed with DA 4,000 million financed as follows: Treasury (DA 2,000 million), CNAC (DA 1,500 million), and BNA (DA 500 million).

Since ADS' micro-credit program is still in pilot phase, there is currently no information on its impact on poverty. Although there is no monitoring system in place for these programs in Algeria, according to international experience, the failure rate of these schemes is likely to be high. For example in Australia, about 60 percent of the businesses failed within the first year; in France and the Netherlands, almost 50 percent of businesses failed within four years.

28. The design of both programs is financially unsustainable and inefficient. The support packages provided by ANSEJ and ADS programs are highly subsidized – even negative. Interest rates and the difference to bank rates is covered by the central Government budget.<sup>11</sup> To date, the financial sustainability of these programs has not been evaluated, but it is likely that current subsidies will reduce efficiency, increase failure rates and increase the demand for public funds. Moreover, while one of the objectives of the ADS program is to fight poverty, there are no mechanisms in place to target specific population groups. In fact, the minimum credit may be too high for individuals in the bottom quintile of income distribution.

29. Given the characteristics of the projects, banks are not willing to finance them. Over one-third of the ANSEJ projects that received bank approval are in the transport sector. In the last two years, project proposals have increased mainly in the agriculture and fishing sectors, but these projects are often rejected by the banks who perceive them as high risk or too small. As a result, since the inception of the ADS program, out of 73,000 credit applications, about 7,000 have been approved, 1,000 have received bank credits and only 100 have been implemented. Almost 50 percent of the projects are in the agricultural sector and over 30 percent are for small businesses. The Government is currently reviewing ADS' programs and, following the Poverty Conference in October 2000, authorities are considering creating a specialized financial institutions for such small projects.

### ***Employment Services***

30. Employment services have inadequate financial resources and are inefficiently run. Public job search assistance and placement services are provided by the *Agence Nationale de l'Emploi* (ANEM). This agency was created in 1990 and, in principle, has the responsibility of organizing and managing the labor market. Since operations of private employment offices are banned in Algeria, ANEM also has the responsibility to match job seekers with suitable vacancies, and to assist enterprises with worker insertion. ANEM has 700 staff in 150 regional and local offices, but these staff are unevenly distributed, and their qualifications minimal. The agency is centrally managed and has no link with enterprises. Its budget is very small (0.2 percent of SP expenditures), of which about 94 percent is allocated to staff wages.

31. ANEM's success in placing unemployed workers in jobs has been limited, only placing 26,000 unemployed workers into jobs (about 1 percent of the unemployed). This corresponds to only three job placements per month per ANEM employee. However given the macroeconomic instability and high labor costs in Algeria, the potential effectiveness of employment agencies is limited; only about 7 percent of the unemployed are even registered with ANEM. Based on international experience, job search assistance schemes can help to reduce unemployment if they are implemented under favorable macroeconomic conditions.

### ***Vocational Training Programs***

32. The vocational training system is supply driven, mainly operated by the Government, and designed to act as a "sponge" for those who drop out of the formal education system. Algeria has the largest vocational and technical training system in the Maghreb, costing about 0.2 percent of GDP annually. The system mainly provides pre-employment training for the large cohorts of out-of-school and

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<sup>11</sup> Reserves for non-performing loans will be accumulated in a guarantee fund managed by the Unemployment Fund (CNAC).

unemployed youth. Graduates of these programs are often ill prepared for the job market, and usually remain unemployed for long periods of time. The Ministry of Vocational Training (MVT) programs are mainly center-based, target urban formal sector jobs, use both institution-based training and apprenticeships, and are free of charge.<sup>12</sup> By the end of 1999, MVT programs had registered 273,000 students, of which 40 percent were in apprenticeship (Box 4). Other ministries also provide sectoral training programs (e.g., agriculture, health, tourism, and handicraft). However, due to insufficient financial resources and lack of coordination with the MVT, these centers are losing their effectiveness. In contrast, private training institutions have experienced very fast growth in recent years. Currently, there are approximately 380 private sector training centers which provide training to around 40,000 trainees. Private training, mostly pre-service training, is concentrated in activities that require low investment (mainly services sectors). Recently, the private sector has begun to develop in-service training and to provide consulting services to enterprises for preparation of training strategies. Overall lack of access to capital and lack of scholarships for students in the private sector impede the development of private training centers.

33. Dropout rates are high, and linkages with the labor market are weak. The public vocational training system managed by MVT lacks a long-term vision and is hampered by a centralized and rigid structure. About 70,000 trainees graduate from the MVT programs annually, and the dropout rate is high at 18 percent, reflecting the bleak employment prospects for graduates, mainly due to the lack of economic growth. Tracer studies carried out by the MVT indicate that only 10 to 16 percent of training center graduates find a job.<sup>13</sup> In respect to apprenticeships, the main micro-inefficiency issues relate to inadequate organization and staffing, lack of follow-up and supervision in the enterprise; weak linkage between apprenticeship design and the needs of enterprises, and inadequate pedagogic monitoring. In the early 1990s, the MVT developed a strategy for in-service training as a priority and for reflecting its responsibility to provide in-service training to improve worker qualifications. However, due to the lack of a concrete strategy, in-service training is still absent, and little has been achieved to create a balance between pre-employment training and upgrading the existing labor force.

**Box 4: Distribution of MVT trainees**

**Institution-based training.** In 2000, there were 150,000 students enrolled mainly in technical sectors, administration and management (21.5 percent); clothing (15.5 percent); computers (12.6 percent); and electricity and electronics (11.6 percent). Almost 70 percent of the students are at low levels of qualification (from levels I to III). The duration of courses ranges from 3 months to 2 years.

**Apprenticeship.** About 104,000 students are concentrated in computers (15 percent); administration and management (12.7 percent); handicraft & services (10.2 percent); and mechanics (11 percent). Almost 80 percent of the students are at level II.

**Evening classes.** About 11,000 students, over 70 percent are taking computers courses.

**Distance learning.** About 10,000 students.

34. Recently, the main axis for developing in-service training has been the creation of FNAC (*Fonds National de Développement et l'Apprentissage et de la Formation Continue*); but doubts remain that the *Fonds* will succeed. Given the financial constraints, the Government has tried to diversify financial sources of training programs. According to the Finance Law of 1991, modified in 1998, all enterprises are required to pay a vocational tax for training (1 percent of the wage bill, split evenly between apprenticeship and in service-training). To manage these funds, FNAC was created in 1998. Its main responsibilities are: (i) managing the vocational tax; (ii) reviewing and approving training requests of the

<sup>12</sup> MVT runs: (i) 466 *Centres de Formation Professionnelle et d'Apprentissage (CFPA)* which provide pre-service training for levels I to IV and target dropouts from the education system; and (ii) 55 *Instituts Nationaux Spécialisés de Formation Professionnelle (INSFP)* for levels IV and V which provide training for technicians in economic activities (construction, mechanic, clothing, arts and graphics).

<sup>13</sup> Between 1992 and 2000, the *Centre d'Etudes et de Recherches sur les Professions et les Qualifications (CRPEC)*, under the MVT, conducted five surveys to assess the insertion rates of the graduates in the labor market.

enterprises; (iii) identifying eligible training programs; (iv) defining modalities and conditions for implementing the training programs; (v) evaluating training program outcomes; and (vi) promoting apprenticeships and in-service training. In practice, however, there is no incentive for enterprises to pay the tax (due to lack of a tax rebate scheme), and FNAC is perceived simply as an additional social charge. Many enterprises are not even aware of the existence of FNAC. The management of FNAC does not involve the social partners; its functions are too broad and not fully focused on in-service training; there is no adequate link between the training programs approved by FNAC and the training strategies needed by enterprises; and application procedures are cumbersome and stringent.

### **B.3 Policy Implications for Labor Market Policies**

35. The challenge for the Algerian Government is to continue its efforts to reduce labor market rigidities, to promote competitiveness and particularly to promote growth. Achieving sustainable economic growth is a prerequisite for reducing unemployment and poverty. Additional interventions could be considered, such as (i) reducing social charges (payroll taxes); and (ii) facilitating employment adjustments while modernizing the business environment. International experience suggests that the unemployed, who do not benefit from current labor legislation, can be a strong political force in supporting this type of reform.

36. In parallel to creating an environment which promotes economic growth, the Government should reconsider the role of active labor market policies to focus on: (i) providing retraining and employment services which address the needs of economy with strong private sector participation; (ii) providing temporary income support to unskilled workers outside the social insurance system through well-targeted public work programs; and (iii) to a lesser extent, ensuring access to credit to entrepreneurs with no collateral through financially sustainable micro-credit programs. These three types of interventions could correct, in part, classical market failures as follows: (i) employment services help address coordination problems related to imperfect information which pervade labor markets; (ii) public works programs temporarily substitute for private demand during economic downturns; and (iii) micro-credit programs address adverse selection problems in capital markets. However, based on international experiences, wage subsidies or training for youth are unlikely to be cost-effective instruments in reducing unemployment. In this context, the following set of policy interventions could be considered<sup>14</sup>:

37. **Wage Subsidies.** According to international experience, wage subsidy programs have substantial deadweight (i.e., wage subsidies are paid to employers who would have hired the workers even in the absence of the subsidy) and substitution effects which careful targeting may help reduce. Since the Government is well aware of the problems and has begun to target the programs mainly toward economic activities, it is advisable to maintain the current level of budgetary resources allocated to these programs.

#### Short-term reforms

- Limit ESIL and CPE to private sector enterprises and cease their utilization in public administration (including *collectivités locales*).
- Once the programs are targeted to the private sector, assess outcomes of the programs before deciding to increase public resources and further promote the programs. The evaluation should assess the effectiveness of these mechanisms in reducing unemployment. This will be a complex task and will require comparisons between employment trends, with and without subsidy.

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<sup>14</sup> Fine-tuning these policy recommendations and their implementation would benefit from a study of labor markets in Algeria and a more rigorous evaluation of programs. Using sound impact evaluation techniques, the efficiency of the instituted programs could be assessed. A good micro evaluation could lead to valuable policy conclusions (i.e., comparing labor market outcomes for individuals who have gone through a particular program with those who have not benefited from the existing schemes). Using international practices, the evaluation should help to answer the following questions: (i) what is the impact of the program? (ii) are the impacts large enough and costs low enough to yield net social gains? and (iii) is this the best outcome that could have been achieved with the public resources spent?

### Medium-term reforms

- Based on the results of the evaluation, the programs should be tightly targeted to those for whom they will be most cost-effective; or
- If the evaluation demonstrates that they are ineffective, the programs should be revised or discarded completely.

38. **Public Works.** There is an urgent need for reviewing the design and eligibility criteria of the public works programs. The Government needs to make a clear distinction between programs that target the poor (IAIG) and programs that target the unemployed (TUP-HIMO). In addition, it should take steps to ensure that public works programs are temporary and do not operate as a mechanism for creating permanent public jobs at the local level. Based on international experience and the original concept for public works programs, adequate self-targeting mechanisms (low wages and labor intensive activities) can effectively provide disadvantaged groups with temporary employment and a safety net, as well as lead to infrastructure development. However, this instrument is not cost-effective if the objective is to provide gainful permanent employment. Given the increase in unemployment among older workers and the increasing poverty during the last decade, public works (particularly IAIG) could be an effective income-generating scheme in a poverty reduction strategy. Public works programs should continue to be financed by the central government as part of its poverty and safety net programs. To improve the efficiency of existing programs, the following reforms could be considered:

#### Short-term reforms

- Enforce self-targeting mechanisms for IAIG, such as requiring a full day's work at half of the minimum wage. This would discourage participation of the non-poor.
- Review legal texts to (i) reduce restrictions on eligibility and allow more than one member of a household to participate in the IAIG program; and (ii) impose a time limit (maximum six months to one year) on the program to ensure that large numbers of poor benefit and that the program does not become a permanent income scheme.
- Eliminate IAIG quotas for wilayas, and geographically target areas with the highest incidence of poverty (mainly rural and peri-urban areas).
- Review the list of eligible activities for IAIG to ensure that they are labor intensive, require no qualification, and do not duplicate TUP-HIMO's activities. Activities in local collectivities (including *cellules de proximités*) should not be financed by IAIG.
- Develop poverty and unemployment maps to be used for both IAIG and TUP-HIMO programs.
- Improve governance at the local level through implementing monitoring criteria to ensure that IAIG programs are reaching the real poor.
- Increase budgetary allocations to the IAIG to allow the growing number of poor to benefit from the program.

#### Medium-term reforms

- Geographically target TUP-HIMO to areas with high unemployment.
- Gradually transform the selection procedures for TUP-HIMO activities towards a system that would allow the beneficiaries to identify their priorities at the community level. This would require abandoning *force account* selections by sectoral ministries. Also, this transformation of TUP-HIMO activities could (i) increase the financial sustainability of the programs; (ii) make the community accountable for maintenance; and (iii) avoid duplication between TUP-HIMO and IAIG.
- Strengthen monitoring systems to assess the impact on poverty, unemployment and the cost of the programs, while improving coordination between IAIG, ESIL and TUP-HIMO.

39. **Micro-Financing.** Institutional organization and financial management of micro-finance programs (ANSEJ and micro-credit of ADS) need to be strengthened. To improve access to capital markets for vulnerable population groups, Algerian authorities are aware that they need to restructure the design of current micro-finance/credit programs, both in terms of their institutional organization and financing mechanisms.

Short-term reforms

- Assess outcomes of the programs and, based on the results of the evaluation, decide whether to continue, or to re-structure them.

Medium-term reforms

- Define the concept based on best international practices. Since these programs are new in Algeria, the objectives need to be clearly defined. Based on international experience, micro-finance programs provide financial services – such as credit, deposit, and savings services – tailored to the needs of the entrepreneur. Good programs are characterized by: (i) small and short-term loans; (ii) streamlined appraisal mechanisms; (iii) alternative approaches to collateral; (iv) quick disbursement; (v) above-market interest rates to cover high transactions costs; (vi) high repayment rates; and (vii) convenient location and timing of services. Therefore, guiding principles for successful micro-finance are: (i) covering costs of lending; (ii) avoiding subsidies; (iii) promoting outreach and demand driven service delivery; and (iv) maintaining a clear focus by avoiding to mix the delivery of micro-finance services with provision of social services.
- Define the role of micro-finance as part of a broader financial sector strategy. Based on international experience, micro-finance should be the joint responsibility of financial and social development institutions and banks should be part of the delivery mechanism. Banks or financing companies with a retail focus operating in a competitive environment are most likely to be effective, as shown by the experiences in Morocco and Lebanon. However, subsidized lending programs channeled through banks — and often imposed on the banks — have proven largely unworkable. In Tunisia and Egypt, for example, borrowers are often selected based on their poverty or unemployment status and not their entrepreneurial capability; banks do not receive technical support to develop the loan screening and monitoring capabilities required for successful micro and small business lending. As a result, repayment rates remain low and banks incur high losses.

40. **Employment Services.** There is a substantial need for streamlining job search assistance programs and placement services with private sector support. ANEM needs to upgrade its capacity to improve the employment prospects of young workers. The following measures are proposed:

Short-term measures

- Prepare a radical restructuring program for ANEM which would (i) allow ANEM to fulfill its responsibilities (organizing and managing the labor market, matching job seekers with vacancies); (ii) update the information systems while increasing the stock of knowledge about labor markets in Algeria (e.g., supply patterns, sectoral demands, skill-mix, characteristics of the unemployed); and (iii) increase the links between employment services and enterprise needs through assisting enterprises to find workers with required skills. The restructuring program should also estimate the costs of reforms, and specify measures and implementation schedules. Establishing a national labor market information system in order to monitor employment and unemployment trends and to assess the cost-effectiveness and impact of the various public interventions in labor markets.
- Allow the operation of private employment services to complement the publicly provided services.

### Medium-term measures

- Implement the reform program of ANEM in order to increase its efficiency and allocate the necessary financial resources.

41. **Vocational Training.** The MVT should continue strengthening its strategy to move existing supply-oriented VT systems toward demand-oriented schemes, particularly through the development of effective in-service training, higher private sector participation and the rationalization of financing mechanisms. Current VT schemes absorb considerable public funds and generally produce few results. The way skills are created, financed and managed has important implications for productivity, unemployment and poverty alleviation. The MVT could continue its reform programs in the following directions:

### Short-term reforms

- Emphasize that the role of vocational training should be to focus on in-service training while making the education system accountable for its services. A comprehensive strategy needs to link the education system with the training system, and link the public with the private sector, with a view to meeting emerging labor market requirements. This entails the adoption of policy frameworks for long-term development and reform. There should be a balance between pre-employment training and in-service training to upgrade the existing labor force's skill.
- Operationalize the reform programs by preparing a national strategy for vocational training that aims at increasing efficiency. To implement the reform programs, the MVT should prepare a concrete implementation strategy as well as a clear set of measurable indicators. This is a complex task which would require a detailed analysis (including costing), as well as a timetable for introducing the reforms.
- Upgrade the quality of training programs and begin consultation with the private sector to develop an efficient in-service training strategy. This would require: (i) improving the capacity of training institutions to prepare training strategies; (ii) upgrading the technical competence of teachers; (iii) developing curricula for in-service training that correspond to enterprise needs (instead of duplicating pre-employment training courses); and (iv) developing apprenticeship programs that would allow students to combine in-enterprise training with courses in the training centers (*formation en alternance*).

### Medium-term reforms

- Adapt the training system to labor market realities in an effort to help increase the employability of the young and of those who have lost their jobs, by improving skills and revising curricula to better respond to the needs of enterprises. In order to ensure better skills matching between job seekers and employers, greater involvement of employers, particularly in the private sector, is needed in the design of training courses. This can be achieved through (i) integrating training in enterprise development strategies by stressing the importance of identifying competency needs, retraining workers, and pooling training resources to realize economies of scale; and (ii) involving social partners (employers, employees, and Government) in the management of financial resources allocated to in-service training, and in FNAC administration.
- Reinforce the responsiveness of the public training system and promote greater diversity of training providers. Increased autonomy of certain high quality centers of the MVT could allow them to supplement their resources with the proceeds of training contracts with enterprises. In the longer term, those public centers that have achieved a strong commercial orientation, a high level of managerial and financial autonomy and improved links with enterprises, could be transferred to the private sector through a variety of formulas (i.e., private concessions).

## **C. THE SOCIAL SECURITY SYSTEM**

42. The social security system provides cash benefits to workers in the formal sector for contingencies such as retirement, disability and survivors' pensions, unemployment and health care

insurance. The system is managed by four public funds, but only CNAS and CASNOS<sup>15</sup> act as collection agencies (Box 5).

43. Expenditures under the social security system account for about 5 percent of GDP, but coverage is low. According to existing legislation, all employers and employees are obliged to subscribe to the social insurance system which provides coverage to workers and their families. The number of contributors (affiliated workers) to the social insurance system reached about 3 million people in 1998, representing 58 percent of the active labor force (*Population Occupée*), and now provides coverage for about 5.6 million people (Table 3).

44. Contributions are high and are perceived as a tax on labor. Contribution rates (about 34 percent of gross wage), paid by employers and employees, are in line with international standards, but high compared to other countries in the MENA region. In part due to the poor quality of the services provided and weak links between benefits and contributions (i.e. free health care is available to every Algerian regardless of affiliation); a large fraction of workers are not contributing to the system. Evasion is particularly severe in the informal sector (i.e., only 20 percent of the eligible self-employed population are affiliated to CASNOS, see Table 4).

#### Box 5: Social Security Funds

- *Caisse Nationale des Assurances Sociale (CNAS)*: manages health insurance, medical leave benefits, and disability benefits for salaried workers. Beneficiaries include affiliates to the social security system (i.e., salaried workers in the agriculture and non-agriculture private and public sectors, civil servants, and pensioners) as well as non-affiliates (e.g. students and other beneficiaries of the safety net programs). CNAS is responsible for the registration of all affiliates of the formal sector and the collection of contributions for other benefit programs.
- *Caisse Nationale des Retraites (CNR)*: administers retirement, survivors, and disability insurance. It receives transfers from CNAS.
- *Caisse Nationale d'Assurance Chômage (CNAC)*: provides unemployment insurance and receives transfers from CNAS. The objective of this fund, created in 1994, is to facilitate enterprise restructuring through allowing labor shedding and to protect workers laid off as a result of enterprise restructuring.
- *Caisse d'Assurance Sociale des Non Saliariés (CASNOS)*: covers self-employed workers and provides both health and retirement insurance for self-employed workers in agriculture and non-agriculture sectors. CASNOS is responsible for the registration of all self-employed workers and the collection of contributions for this group.

Table 3 : Coverage of the Social Insurance System  
(in '000)

	1991	1998
<b>Total contributors</b>	3,495	3,097
Salaried workers 1/	2,930	2,712
<i>Private Sector</i>	430	370
<i>Public Sector</i>	2,500	2,342
Self-employed 2/	565	385
<b>Non-contributor Beneficiaries</b>	1,360	2,485
Pensioners, dependents & disabled	640	1,077
Others (handicapped, Moujahedines, students, safety net, etc.)	720	1,408
<b>Total covered affiliates</b>	4,855	5,582

Note: 1/ Affiliates to the CNAS; 2/ Affiliates to the CASNOS.

Source: CNAS & Ministry of Labor.

45. Social security funds have been facing financial difficulties since 1996 - particularly pension and health insurance. The financial imbalances are mainly the result of: (i) a lack of actuarial links between benefits and contributions; (ii) the use of the system's resources to pursue social objectives unrelated to social insurance; (iii) the stagnation in the contribution base, particularly due to high unemployment and

<sup>15</sup> In 1998, a fifth fund was created, the *Caisse des Congés Payés pour le Bâtiment et Travaux Publics (CACOBATPH)*. This fund is responsible for providing paid leave and unemployment insurance for construction workers who may seasonally lose their jobs. It was created to facilitate the mobility of construction workers and is generally meant for temporary workers.

lack of job creation; (iv) the sharp increase in some benefits in the past few years without a corresponding adjustment of contribution rates (particularly in the case of pensions); (v) the depreciation of the dinar, which has increased the costs of imported pharmaceuticals; (vi) the benefit formulas linked to the minimum wage, which has been repeatedly increased; (vii) substantial increases in pensions of war veterans; and (viii) the escalation of health care costs due to inefficient health care management. For example, the financing of health care coverage for non-affiliates and the substantial increase in the war veterans pensions have all contributed to the erosion of the financial viability of the system. According to preliminary estimates of the CNAS, the Government would have to pay about DA 40 billion to social security funds (CNAS, CNR, CASNOS) in order to cover the unfunded expenses of the system that have been incurred.

**Table 4 : Financial Balances of the Social Insurance System  
(in billion DA)**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>1. Social Insurance and work related injuries (CNAS)</b>				-1.0	-0.4	-1.7	--4.6	-1.6	-0.3		
Revenues				38.0	39.6	43.4	51.2	55.2	62.2		
Expenses				39.0	40.0	45.2	55.8	56.8	62.5		
of which: Lump sum to Hospitals	8.6	2.5	9.5	10.0	11.3	13.5	16.6	18.0	19.6	19.9	
<b>2. Pension Benefits (CNR)</b>	-1.8	-1.8	1.1	0.3	0.4	-1.1	-7.9	-12.1	-25.3		
Revenues	7.6	13.0	22.9	27.2	32.4	35.6	37.9	44.0	47.0		
Expenses	9.5	14.8	21.8	26.9	32.0	36.7	45.8	56.1	72.4		
<b>3. Unemployment Insurance (CNAC)</b>								15.4	15.5	11.3	6.8
Revenues								18.4	22.7	19.9	11.6
Expenses								3.1	7.2	8.6	4.8

Source: CNAS, CNR & CNAC.

46. Over time, a series of sub-programs which target different population groups have evolved within the core programs (health, pensions, unemployment), each with particular benefit formulas and often without explicit financing sources. The current structure of contributions and benefits across funds is highly complex. As within the core programs (health, pensions, unemployment) a series of sub-programs coexist which target different population groups, have distinct benefit formulas and often have no explicit financing sources. During the 1990s, contributions levied on employers and workers have been used to provide benefits to groups not affiliated with the social security system, such as the beneficiaries of the social assistance and safety net programs.

### C.1 Pension System

47. Both CNR and CASNOS are defined-benefit systems<sup>16</sup> that cover 31 percent of the labor force and are financed through employer and worker contributions. CNR, the regime for employees in the public and private sector, is financed through a 16 percent payroll tax (9.5 percent paid by employers and 6.5 percent paid by employees), which is low compared to OECD standards, but high compared to other MENA countries (e.g., Tunisia 12 percent). The system covers 27 percent of the labor force. CASNOS is financed by a 7.5 percent tax on income and covers only 4 percent of the labor force.

48. While Algeria's population is relatively young, low coverage rates lead to system dependency ratios which are high even by OECD standards. In Algeria, the old-age dependency ratio is close to 7 percent (the population aged 65 or older over the population aged 15-64) and is low compared to OECD countries (with an average of 19 percent). Given the low coverage in terms of active affiliates, however, the dependency ratios are high and have increased substantially during the 1990s. For example, in 2000,

<sup>16</sup> In a defined pay-as-you-go benefits system, benefits are determined by a formula, based on the number of years of covered work, earnings, and other worker characteristics.

CNR had 1.25 million beneficiaries for 2.7 million contributors, implying a dependency ratio of 46 percent (compared to 18 percent in 1991), 10 percentage points above the OECD average. Similarly, CASNOS' dependency ratio approximates 32 percent, with 110,000 beneficiaries and 346,000 contributors. The increase in the dependency ratio is due to the stagnation, even decline, of the active population as a result of widespread unemployment and to the increase in the number of beneficiaries as a result of the increase in early retirement programs, despite a favorable demographic structure. Currently, of the 2.5 million beneficiaries of long-term pensions in the formal sector, 24 percent are direct old-age pensioners, 21 percent are survivors and disabled pensioners, and 57 percent are pensioners benefiting from the assistance programs.

49. Benefits are generous compared to contribution rates. In response to generous benefits, contribution rates for pensions were increased gradually from 7 percent in 1985 to 16 percent in 2001. The pension system offers generous benefits with a maximum replacement rate of 80 percent. The retirement age is relatively low (60 years for men and 55 years for women), and the annual accrual factor is generous (2.5 percent per year), implying that the maximum pension is reached with 32 years of service. The minimum length of service required to be eligible for a pension is also low by international standards. On average, a contributor can retire after only 10 or 15 years of contribution provided s/he is 60 years old. This creates a very serious incentive to evade. The salary on which the pension is calculated is defined as either the annual salary earned in the last year of service, or the average of the three highest annual salaries over the worker's entire career, whichever is greater. This formula encourages under-reporting of salaries during most of a person's career (consequently reducing their contributions) and the over-reporting of salaries during the last few years before retirement (thus increasing the pensionable salary). The government has twice increased the number of years on which pensions are calculated: to four years in 1997, and to five years in 2000.

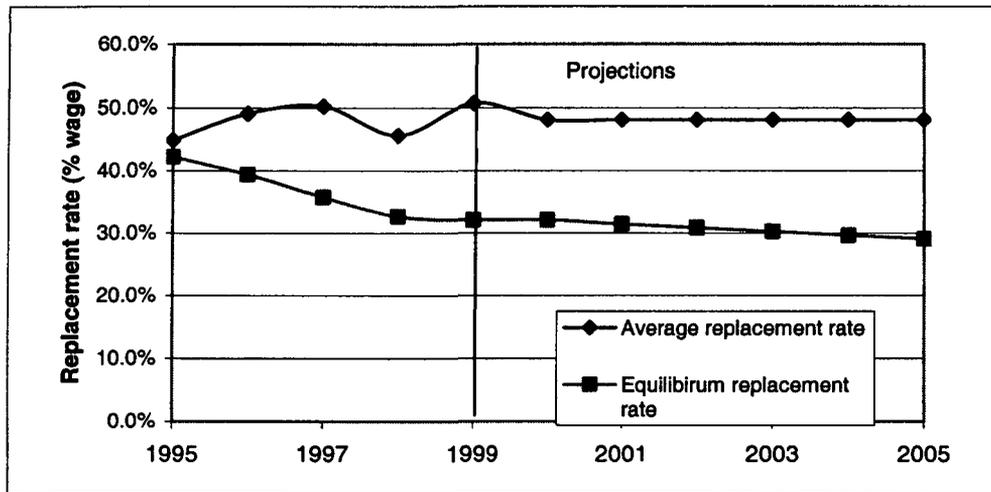
50. Substantial increases in minimum pensions have negatively affected the financial position of the system. The minimum pension, received by almost 20 percent of pensioners, increased from 75 percent of the minimum wage (DA 4,800 per month) to 100 percent of the minimum wage in 1999 (DA 8,000 per month since January 2001); and the minimum pension for war veterans (moujahedines) increased from DA 1,500 per month in 1990 to DA 15,000 per month in 1998. These increases have not been accompanied by appropriate financing mechanisms. On the other hand, in the absence of indexation, the real value of pensions above the minimum level has considerably eroded over time. Currently, the average pension paid is about DA 8,000 per month and the maximum pension does not exceed DA 12,000 per month.

51. Since 1990, CNR and CASNOS have incurred operational deficits that are expected to increase over time. The situation is particularly critical in the case of CASNOS due to the unfunded increase of the minimum pension. In 2001, the increase of contributions allocated to CNR helped cover expenses but growing deficits are expected for CNR and CASNOS in the near future. Contributions, however, cannot continue to increase, since high social charges are already distorting labor markets. Therefore, deficits would need to be covered through additional transfers from the central government.

52. The current financial crisis can be explained by the mismanagement of reserves and by the failure of the system to adjust contributions and benefits in response to increasing dependency ratios. As explained above, during the last two decades, reserves accumulated by CNAS have been used to finance a series of unfunded social assistance programs or investment projects without adequate rates of returns. Nonetheless, even if CNR's reserves had been managed efficiently, a financial crisis would have eventually occurred given that the system has become overly generous. Indeed, with the current contribution rate (16 percent of wages) and the current dependency ratio (47 percent), the equilibrium average replacement rate (the share between the average pension and the average wage) should be close to 30 percent, or 20 percentage points below the current replacement rate of 50 percent. The gap between equilibrium and observed replacement rates widened during the last seven years (Figure 2) as the number of workers per beneficiary declined from 5.5 in 1995 to 4 in 1999, and an expected 3.6 in 2002. In the

case of CASNOS, with a 7.5 percent contribution rate to the pension branch, and a 30 percent dependency ratio, the equilibrium average replacement rate should be close to 25 percent, 8 percentage points below the observed replacement rate.

**Figure 2: Dynamics of observed and equilibrium replacement rates in CNR**



Source: World bank estimates.

## C.2 Health Care Insurance System

53. The structure of the contributions to CNAS to cover health care costs bears little or no relation to the benefits provided. Most health care services are provided through the public sector and are financed in large part by CNAS (about 44 percent of public health care expenditures). Total health expenditures were estimated at about 3.8 percent of GDP in 1998. Budgetary health care expenditures represented about 28 percent of total health expenditures. Compulsory health insurance expenditures (CNAS) accounted for about 44 percent. Users' participation (out-of-pocket payments from patients) accounted for the remaining 28 percent (see Annex II, on Health).

54. The financial sustainability of Algeria's health insurance is endangered. Health insurance suffers from three major issues: (i) insufficient incentive to contribute to the system because individuals can get health care in public sector facilities irrespective of being affiliated to the social insurance system; (ii) contribution rates have not been adjusted to the increase of benefits costs (i.e., since 1990 the contribution rates have been kept at 14 percent of gross wage); and (iii) management of healthcare services is inefficient. Inexpensive public sector health care provision, lack of contribution adjustment and lack of effective cost controls present major challenges to the financial viability of the health care insurance system. In practice, affiliates are charged three times to obtain health care (general taxes, contributions, and out of pocket). In addition, CNAS indicates that it is paying twice for services: a lump sum payment to the Ministry of Health, and reimbursement to patients for drugs and private sector care.

55. The insurance system, in principle, finances public health care available to contributors and their dependents, and to those non-contributors that benefit from the assistance and safety net programs. In practice, no distinction is made in the public health system between contributors and non-contributors, nor is there currently any way to identify those who should benefit from the safety net programs. As a result, the incentive to contribute to the system is weak, and inexpensive public health care coverage presents challenges to the financial viability of the social insurance system. Basic health care services are, in principle, available to the entire Algerian population regardless of income. The compulsory health insurance scheme is subsidizing the state by providing free health care to the lowest income groups (e.g., veterans, invalids, and beneficiaries of the social safety net programs).

56. Growing payments to hospitals have added to the financial unsustainability of the system. CNAS and CASNOS make lump-sum payments to the public hospital system (about 90 percent of the lump sum payment to hospitals is paid by CNAS). This lump sum payment has almost tripled during the 1990s (from DA 8 billion in 1990 to DA 22 billion in 2001), mainly due to a rapid rise of health care expenditures during the 1990s which can be explained by: (i) the limited extent of cost controls, including the absence of an integrated cost accounting system for health care services; (ii) the dinar devaluation in the early 1990s which has resulted in higher domestic prices for pharmaceuticals (from DA 0.5 billion in 1988 to DA 21.5 billion in 2001); and (iii) an increase in the number of health insurance beneficiaries, particularly due to the expansion of the safety net programs without sufficient funding.

### C.3 Unemployment Insurance

57. The Algerian system of unemployment benefits was introduced in 1994 for close to 2.8 million workers in the formal sector, including public enterprises and government administration (the share of private firms is small). The program consists of a severance component and monthly income support. Its basic contributory structure and benefit design are similar to many Eastern European and OECD countries, but the additional financing provided by firms in the form of an initiation fee is unusual. At the time of separation, firms are required to pay retrenched workers a severance package of up to three months of salary.<sup>17</sup> In addition, two months after separation, workers start receiving a monthly benefit paid by CNAC at a level proportional to each worker's salary. The unemployment insurance component was initially financed by two sources: (i) a 4 percent payroll tax shared by the employer and employee (2.5 percent and 1.5 percent, respectively); and (ii) a *Contribution d'Obtention de Droits* (COD) initiation fee paid by firms to CNAC for each retrenched worker. In 2001, as cross-subsidization among funds, the payroll contribution rate allocated to CNAC was reduced by half and reallocated to the CNR to improve its financial situation, while maintaining the total payroll tax of the social security system (34 percent).

58. Despite a growing demand for benefits and high administrative expenditures, the CNAC has generated a surplus averaging 0.5 percent of GDP per year. Since 1995, separation rates have increased, and as a result, the number of beneficiaries grew from 36,000 in 1996 to 183,000 in 2000. Most layoffs came from public enterprise downsizing. Nearly 70 percent of the beneficiaries were between 31 and 50 years of age and the majority are unskilled workers.<sup>18</sup> Expenditures increased sharply, from DA 1.8 billion in 1996 to DA 8.6 billion in 1999, but then fell to DA 4.8 billion as benefit payments were halved (these constitute 85 percent of expenditures). Revenues also dropped from DA 20 billion in 1999 to DA 11.6 billion in 2000, as contributions and COD revenues were reduced by 50 percent and 80 percent respectively. As a consequence, CNAC's surplus in 2000 was reduced to 0.17 percent of GDP (Table 5).

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<sup>17</sup> This is equivalent to one month's salary per year of tenure up to three years.

<sup>18</sup> Among the beneficiaries, 40 percent are between 41 and 50 years of age; 65 percent have a primary level of education, and only 8 percent have more than a secondary level of education.

**Table 5: The unemployment insurance payroll tax seems excessive to finance the system even in the presence of an expanding population of beneficiaries**

	1995	1996	1997	1998	1999	2000
GDP (billion)	1,975	2,474	2,762	2,782	3,171	4,076
Number admitted	20,835	36,108	92,151	164,630	179,127	183,384
Number terminating		6,868	21,463	39,696	81,139	126,173
New admitted		15,273	56,043	72,479	14,497	4,257
Total employment (million)	2.8	3	3	3	3	3
<b>Revenues (million)</b>	-	11,000	18,440	22,685	19,929	11,635
COD			3,485	4,724	1067	226
Payroll tax advances by CNAS		11,000	11,747	14,412	14,991	7,200
Revenues and placements			3,208	3,549	3,871	4,209
<b>Expenditures (million)</b>	316	1,734	3,063	7,162	8,580	4,848
Benefits	316	1,734	2,770	6,730	8,148	4,195
Insertion programs				2.1	22.6	34.6
Support to firms						0.9
Administration			150.5	256.0	165.0	447.0
Investments			142.3	174.3	243.9	170.0
<b>Balance</b>	(316)	9,266	15,377	15,523	11,350	6,788
<b>Share GDP</b>	-0.02%	0.37%	0.56%	0.56%	0.36%	0.17%

Source: World Bank calculations on the basis of information provided by CNAC (currency amounts expressed in dinars).

59. To date, the major structural problems facing the system are related to high separation costs imposed on firms and benefits that are likely to distort workers incentives. By replacing a system of mandatory severance payments, which required union approval of layoffs, the new UI system effectively made firing easier through lower separation costs and greater autonomy. Because retrenchment is not voluntary, firms also avoid efficiency losses associated with adverse selection by retaining their most productive workers. Despite the recent decrease in the contribution rate allocated to CNAC, the initiation fee appears to impose unnecessary costs on firms that may discourage hiring. Moreover, the long duration of benefits, averaging 22 months, may discourage job searching, thereby swelling the ranks of the long-term unemployed.<sup>19</sup>

60. Although the payroll tax has been reduced recently, the observed diversion of reserves to new active labor market initiatives raises concerns about the financial sustainability of the system. Preliminary projections suggest that even if the share of new layoffs to formal employment will increase, the system will be sustainable. However, reserves are being used to finance various initiatives aimed at promoting reinsertion of separated workers into employment (i.e., job search training programs, technical support to entrepreneurs seeking funding through programs offered by ANSEJ re-training, and long-distance training managed by MVT) that are likely to be costly and ineffective, thus threatening the financial sustainability of the system.

#### **C.4. Policy Implications for Social Security System**

61. The Algerian social security system is highly complex, and improving its macro and micro efficiency will require updating the inventory of its programs, assessing the rationale for their existence, clarifying their objectives and identifying appropriate financing mechanisms. The major macro

<sup>19</sup> Unemployment benefits can be paid for up to three years.

inefficiency of the system is that programs that have the characteristics of an insurance service (and which are financed through member contributions) coexist with social assistance programs without direct financing mechanisms. International experience suggests that social insurance and social assistance schemes should be clearly separated. While many countries still provide social assistance programs within the core social security system, for instance, to finance the health and pensions of low-income population groups, the trend is towards ensuring that access to the subsidized programs is conditional on contributions. Since beneficiaries are usually low-income groups, their contribution rates tend to be lower than in the core programs. It is also important that the sources of financing subsidies are defined in a transparent way, for instance, by specifying the share of the contribution rate to the core program that is transferred to the subsidized program.

62. A rigorous analysis of the financial situation of the social security system will require urgent identification of the flows of financial resources from workers to CNAS and CASNOS, and from these funds to the various schemes and sub-programs. The guiding principle is that the source of financing for each program should be made explicit, even when it involves cross-subsidies from workers contributing to the social security system to individuals who do not contribute or cross subsidies among insurance programs (i.e., unemployment insurance and pension).

63. Addressing the financial unsustainability of the social security system is urgent. One solution might be to increase contribution rates. However, this could further encourage underpayment, increase evasion, encourage the informalization of the economy, and increase the cost of labor in an economy that already suffers from high unemployment. Even within a broad social security reform, and based on a thorough analysis of the social coverage needs and the resources that will be required, the possibility of reducing the existing payroll taxes should be considered. Therefore, correcting the structural sources of financial imbalances of the social security system is a more sustainable alternative than increasing contribution rates. In this context, efforts should focus on the following for all benefits (pension, health care insurance and unemployment insurance):

#### Short-term measures

- Define the objectives of the social security system and separate them from the assistance programs which need to be financed by the Government. The first step towards higher efficiency and equity of the social security system is to update the inventory of current programs, while reviewing their rationale and specifying appropriate financing mechanisms.
- Improve the technical capacities of all funds to develop an accurate and up-to-date database and to evaluate the financial and social impacts of parametric and structural reforms.
- Construct a simplified and preliminary actuarial model that will allow adjusting the basic parameters of the social security benefits to the demographic structure of the beneficiaries (particularly for pension benefits of CNR and CASNOS). The main objective is to create a stronger link between benefits and contributions in the medium term in order to reduce costs related to the coverage of affiliates and their dependents, and to increase the incentives for affiliation and encourage the expansion of the contribution base.

#### Medium-term measures

- Prepare to introduce a unique identification number system for all social security benefits.
- Launch in-depth studies to review the economic issues and structural problems of the social security system (on labor market, health care costs, demographic structure of the population, characteristics of unemployed, etc.).
- Based on the results of the studies, develop a detailed actuarial model to assess the impact of structural reform options for improving financial viability of the present system. Reforms should aim at containing the contribution rates or even exploring options for reducing payroll taxes. In a high-growth economy, these measures could contain costs in the existing system, but in the long-run they will not be

sufficient and more fundamental reforms will need to be considered (i.e., multi-pillar pension system and health care insurance reform).

### *Pensions*

64. International experience suggests that in middle-income countries with a relatively young population, a two-stage approach should be adopted for reforming the pension system: the first stage would focus on consolidating the public pay-as-you-go system while providing incentives to promote private savings (both personal savings and occupational pension programs), while the second stage would expand coverage, improve equity and address the aging of the population through the introduction of a funded pillar with individual accounts. The exact characteristics of the pension system should be tailored to each country. This section outlines policy recommendations to improve the financial situation of Algeria's pension funds.

#### Short-term recommendations

- *Define the main objective of the pension systems.* There is an urgent need to reconsider the social goal of the pension system in Algeria. Its role should be limited to providing economic security for old age. A limited amount of redistribution from high- to low-income workers may be included in the objectives of a well-functioning pension system, although it is preferable to use general tax revenue for welfare policies rather than payroll taxes that distort incentives in the labor market.
- *Improve institutional capacity.* The efficient management of the current pay-as-you-go system and the design and implementation of future structural reforms (e.g., the introduction of a funded pillar), will require improving institutional capacity. To this end, the central budget should allocate resources to update the current information system and to develop an actuarial simulation tool in-house.

#### Medium-term recommendations

- *Improve financial sustainability by aligning system parameters with the current demographic structure of the pension funds.* As previously discussed, given high dependency ratios in both CNR and CASNOS, current contribution rates are not in line with current replacement rates. Since contributions are already high in Algeria, pension fund managers could consider rationalizing and revamping the existing benefit formula. This can be achieved by: (i) slowing down the increase in the dependency ratio by extending vesting periods (the number of years of contributions) from 15 to 20 or 25 years; (ii) reducing replacement rates by cutting back the accrual rate from 2.5 percent to 1.5 percent-2 percent; and (iii) raising the retirement age which would increase the pool of contributors and improve the financial situation of the pension fund. These reforms are not likely to eliminate the current deficit (at least in the case of CNR), as current pensions will not be affected. Reforms would begin to have an impact after three or four years. In the meantime, transfers from the central budget will continue to be necessary. These parametric reforms need to be fine-tuned. To this end, actuarial projections should be conducted for both CNR and CASNOS under alternative economic, demographic and coverage scenarios.
- *Launch medium-term structural reforms.* Once the short-term institutional and financial problems have been solved, attention should shift to issues of expanding coverage, improving equity, promoting contractual savings, and addressing the financial problems resulting from an aging population. One alternative that the Government could consider is the introduction of a mandatory funded pillar with individual accounts. In this type of system, the ratio between the active population and the retired population no longer affects its financial position, as the benefits received by workers when they retire are a function of the savings they have accumulated during their working lives. For equity purposes, the current pay-as-you-go system would continue to operate, but it would no longer be the main source of income for retirement. Its function would be to redistribute income from high-income to low-income workers by guaranteeing a minimum pension. The transition to this multi-pillar system is a complex

process and studies on transitional issues would need to be conducted in advance. The proposed system of incentives to promote voluntary savings would smooth the transition process.

### ***Health Care Insurance***

65. There is widespread awareness in Algeria of the key issues involved in improving health care efficiency, equity and financial sustainability, particularly within the health care community, and authorities have begun to take action. In order to contain health care costs, particularly those of pharmaceutical products, CNAS has begun to streamline the list of subsidized drugs and to revise the reference prices.

66. The financing of health care in Algeria is likely to continue to be three fold: (i) government resources would provide free or subsidized health care to the poor; (ii) as the economy becomes more structured and contracting mechanisms are put into place, the social health insurance would cover the health care costs for affiliates to the social security system; and (iii) direct payments would continue to cover certain types of services for the non-poor uninsured persons. Given that health care costs are likely to increase rapidly and the resources to cover them must keep pace, reforms are urgently needed to balance the revenues and expenditures of health care insurance or services would face deterioration.

67. The financial equilibrium of the health insurance funds is a function of: (i) the contribution base which varies with the real income level of contributors and the extent to which incomes are underestimated or undeclared; (ii) the services covered by the insurance system (benefit package); (iii) the size and age structure of the population covered; (iv) the contribution rate; (v) the efficient cost of health care which varies with the supply of services, frequency of use, intensity of care and unit costs of health delivery; and (vi) the reimbursement rate of medical care providers. Contribution rates, reimbursement rates and benefit packages are the main variables that the health insurance fund can manipulate in order to guarantee financial equilibrium, once the contribution base has been maximized and the evolution of the cost per member has been controlled. Acting on these rates before changing the contribution base and cost of health services could be detrimental to the overall system. Indeed, they would lead to unjustified increased labor costs that would encourage under-affiliation, income under-declaration, and a reduction in the level of coverage that would affect the poorest insured population in a disproportionate way. The reform of Algeria's health insurance system could aim at: (i) combating evasion in the short term through enforcing laws, aligning contributions to benefits, and establishing costing and contracting mechanisms so that the MOHP can bill CNAS directly for services provided to affiliates; and (ii) in the medium-term, controlling the potential for cost escalation, increasing user charges, changing the benefit packages and considering different financing and provider payment reform options (i.e., basic universal publicly financed coverage, complementary voluntary scheme, etc.).

### **Short-term measures**

- *Redefine the objectives of the health insurance system, rationalize its expenditures, and link health care coverage to affiliation with insurance funds (CNAS and CASNOS).* Similar to the old-age benefits, there is an urgent need to reconsider the social action of the health insurance system in Algeria. To this end, a clear distinction should be made between the affiliates who contribute, those who are capable of paying but evade while benefiting from free health care, and the special groups (i.e., social assistance and social safety net beneficiaries) who cannot pay and are covered under the social action plan of the insurance system. Since the main objective of health insurance is to provide adequate coverage to its affiliates, the cost of health insurance for people who cannot afford it should be supported by the treasury or the line ministries responsible for the welfare of these groups (i.e., Ministry of Labor for assistance and safety net programs, Ministry of National Solidarity for the beneficiaries of their programs, Ministry of Moujahedines for their own beneficiaries, etc.). Measures should be considered to reduce the effect of available subsidized health care on the incentives to join the social insurance system. Linking health

coverage to affiliation with CNAS would reduce evasion and also encourage expansion of the social insurance system's contributor base.

- *Adjust contributions to benefits.* Efforts to combat under-declaration of income should be intensified in order to maximize the contribution base. According to various hypotheses of rates of coverage (which vary from one type of service to another), contribution rates could be derived that would guarantee the financial equilibrium of the health insurance schemes.
- *Contain health care costs.* Measures include: (i) in collaboration with the Ministry of Health, developing a unit cost data of the health care services within the public hospitals; (ii) establishing contractual relations between CNAS and the health care service providers through an incentive-based provider payment system; (iii) controlling costs and the quality of health care more adequately; (iii) increasing user charges for misused services (e.g., drugs).

#### Medium-term measures

- *Develop a costing system as a basis for developing an incentive-based provider payment system.* To this end: (i) reevaluate the basis for reimbursement; (ii) reexamine the level and disincentives effect of the co-payment scheme; (iii) reevaluate the health expenditures of various health insurance schemes and the unit costs of health care delivery (varying with type of care) through revising the frequency and intensity of health care services; (iv) evaluate the delivery system; (v) consider provider payment reform; (vi) regulate the private sector; and (vii) set standards for ensuring quality. These measures should be closely coordinated with the Ministry of Health.
- *Limit service benefit packages.* The Government needs to consider limiting benefits covered by the Ministry of Health and the CNAS to the most cost effective services (e.g., immunization, primary care, preventive care, medically cost-effective curative services).
- *Consider various reform options in terms of complementary schemes.* This would include the development of voluntary schemes designed to partially cover health expenditures not borne by public compulsory schemes.
- *Strengthen institutional capacity of the health care authorities.* This could be addressed through: (i) formulation and institutionalization of a National Health Accounts system (an important tool for policy analysis and formulation); (ii) implementation of a hospital management system; and (iii) strengthening of the Ministry of Health's monitoring and evaluation tools.
- *Increase revenues allocated to health care services.* Once financial efficiency and quality of services delivered are improved, revenues allocated to health care services could be increased through earmarked taxes on private health insurance, cigarettes and alcohol.

#### Unemployment Insurance

68. While Algeria has an advanced unemployment insurance system, still lacking in many middle-income countries, some fine-tuning is necessary in order to reduce labor distortions while improving the financial position of the fund. The challenge at this stage is to reduce labor distortions, thus stimulating employment creation, while rationalizing the management of fund reserves. To achieve the former, the cost to firms and the length of benefits could be reduced. To achieve the latter, on the other hand, avoiding the diversion of reserves to the financing of active labor market policies without appropriate rates of return would be required. The Government has already introduced reforms along these lines, for instance by easing the time period over which is paid by enterprises. As in the case of labor market policies, fine-tuning and implementation of these reforms will benefit from a study of labor markets in Algeria. Some basic reforms that could complement current Government efforts are as follows:

#### Short-term reforms

- *Rationalize the management of reserves.* An area that should receive attention is the fiscal monitoring of CNAC's revenues and expenditures, both present and future. By spending the accumulated

resources on investments and other new initiatives, already witnessed to some degree in 1997 and 1998 by a rapid increase in “other” expenditure, the CNAC authorities risk dissipating reserves. CNAC needs to develop a prudent investment strategy.

- *Update the information system.* Close monitoring is effective not only in improving financial efficiency, but also in tracking the characteristics of beneficiaries. Under the existing information system, data is collected on the personal and occupational characteristics of each worker admitted into CNAC. This information could be used to rationalize services offered to beneficiaries, for instance by designing training programs targeted to the needs of CNAC’s clients. In a related area, greater use could be made of the information system to monitor the number of beneficiaries entering and exiting eligibility, the status of COD payments and the effective collection of payroll taxes.

### Medium-term reforms

- *Reduce costs to firms by rationalizing the payroll tax and initiation fees, and eliminating severance awards.* CNAC’s accumulated reserves provide an opportunity to improve the fund’s financial efficiency rather than increase expenditure or reallocate contributions between schemes (unemployment insurance and pension) that are already unsustainable. For instance, rationalizing the payroll tax and the costly COD could reduce disincentives to restructuring. Finally, the existing severance package could be completely replaced by a coordinated unemployment insurance benefit. The implementation of these reforms will require updating the projection of the financial performance, under different scenarios on economic growth, of the unemployment fund, labor prospects and civil service downsizing targets. Expanding knowledge about the functioning of labor markets in Algeria through a sectoral study would be desirable.

- *Reduce the duration of benefits eligibility.* This could be accomplished most easily by reducing the maximum eligibility period from three to two years, while perhaps increasing accumulated benefits. Under the current scheme, the level of benefits received towards the end of the eligibility period is very low in real terms, suggesting that UI benefits alone may be insufficient, thus forcing unemployed workers to reduce their reservation wages. By providing higher benefits during a shorter period of time, this intervention can motivate job searching while generating savings to the unemployment fund.

## **D. SOCIAL ASSISTANCE PROGRAMS**

### **D.1 Increase in poverty and deterioration of living standards**

69. The stagnation of economic growth since the late 1980s has exacerbated the unemployment problem in Algeria, and caused a severe deterioration in the living standards of the population; the incidence of poverty has increased significantly during 1987-2000. The main causes of this increase were the lack of economic growth and the resulting decline in employment opportunities. GNP per capita declined from US\$2,880 in 1987 to US\$1,580 in 2000, reflecting an impoverishment of the country as a whole. The impact of the economic crisis on the welfare of households has been extensive. According to preliminary estimates,<sup>20</sup> at least 20 percent of the population was poor in 2000, compared to 8 percent in 1988. Although 70 percent of the poor lived in rural areas, according to the Poverty Assessment, the share of poor in urban areas has also increased (from 28 percent in 1988 to 31 percent in 1995). The poor are also more likely to live in households where the head of the household is unemployed (11 percent for the poor compared to 5 percent for the non poor). Data suggest that this increase in unemployment has contributed to the increase in the incidence of poverty, particularly in urban areas. In addition, unemployment is higher among the poor population of working age than among the non-poor, in both rural and urban areas.

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<sup>20</sup> The poverty estimates for 2000 are based on the elasticities calculated by the *World Bank Poverty Assessment (1999)* and rate of economic growth during 1995-2000. The poverty incidence should be updated once the 2000 household consumption survey data are available.

**Table 6: Expenditures in Social Assistance Programs (%GDP) and number of beneficiaries ('000)**

	1993	1994	1995	1996	1997	1998	1999	2000
Family Allowance	0.21%	0.66%	1.25%	1.46%	1.62%	1.53%	1.15%	0.84%
	4,000	4,000	4,000	4,000	4,000	4,500	4,500	4,500
Moujahedines	0.92%	0.73%	1.39%	1.32%	1.56%	1.89%	2.06%	1.58%
	n.a.							
AFS	1.21%	0.84%	0.40%	0.28%	0.26%	0.29%	0.24%	0.21%
	-	-	-	820	825	820	811	800
Cash/In-kind transfers 1/	0.03%	0.05%	0.09%	0.09%	0.18%	0.21%	0.19%	0.21%
		27	40	35	43	65	68	66
Price support funds	1.22%	1.60%	0.87%	0.46%	-	-	-	-
	Univ.	Univ.	Univ.	Univ.	-	-	-	-
Oeuvres sociales	0.14%	0.15%	0.14%	0.14%	0.16%	0.17%	0.15%	0.16%
	n.a.							
IPSU Fonctionnaires	0.17%	0.11%	0.03%	0.02%	0.01%	0.01%	0.01%	0.01%
	n.a.							
Solidarity Ministry	0.00%	0.00%	0.01%	0.02%	0.03%	0.04%	0.03%	0.01%
	-	-	-	209	1424	2026	1718	1620
Others	0.18%	0.16%	0.14%	0.13%	0.13%	0.13%	0.13%	0.11%
	n.a.							
Total	4.07%	4.31%	4.31%	3.91%	3.95%	4.28%	3.96%	3.13%
	4,000	4,054	4,080	5,099	6,435	7,475	7,163	7,052

1/ Transfers and programs for children, elderly, handicapped and victims of terrorism.  
Source: Official data.

70. Despite the increase in poverty, public expenditures on targeted assistance programs have declined. While the total cost of assistance programs (safety nets) measured about 3 percent of the GDP in 2000 (compared to 4 percent in 1993), the bulk of costs is allocated to programs that do not actually benefit the poor - family allowance (0.8 percent of GDP) and pensions for war veterans (moujahedines - 1.6 percent of GDP). Only 20 percent of the assistance programs are targeted to the poor (0.5 percent of GDP compared to over 50 percent in the early 1990s). By contrast, assistance programs designed to benefit salaried workers (e.g., family allowance) and war veterans are substantially increasing (capturing over 80 percent of the social assistance budget in 2000, compared to 13 percent in the early 1990s) despite the stagnating number of beneficiaries. Most of the poor (mainly those in rural areas and in the informal sector) do not benefit from these programs.

## D.2 Efficiency of the Assistance Programs

71. This section reviews three types of assistance programs: (i) family allowances for salaried workers in the formal sector, managed by the CNAS; (ii) social assistance programs, managed by the Ministry of Social Protection; and (iii) programs managed by the Ministry of Solidarity and Family, which provide mainly in-kind transfers for the very poor. Programs targeted to moujahedines are not covered in this review. Overall family benefits are targeted to wage earners, increasing the cost of labor; there is no targeted support to families (with children) and no source of income. Among the assistance programs, *Allocation forfaitaire de solidarité* (AFS) does provide income support to poor elderly and handicapped, and is the most efficient program in terms of coverage and cost despite some leakages.

## ***Family Allowance***

72. Algeria's most important social assistance program is a family allowance that covers salaried workers with children. While the program was initially financed by employers, the Finance Law for 2001 transferred its obligations to the central budget<sup>21</sup>. In 2000, about 14 percent of the population, (i.e., 1.3 million families or 4.5 million children) received these benefits. . The program costs DA 30 billion. Although the number of beneficiaries stagnates, the cost of the program has substantially increased from 0.2 percent of GDP in 1993 to 0.8 percent of GDP in 2000, mainly due to the increased amount of the benefits (Table 6). The level of the family allowance varies by the number of children and family income.<sup>22</sup> The main problem of the program is that it does not cover poor families with children in the informal sector. Its coverage is limited to wage earners in the formal sector who are affiliated to the social security system, while the poor with children do not receive any child support or other benefits from the Government.

## ***Assistance Programs managed by the Ministry of Labor and Social Protection***

73. MTPSFP is in charge of two safety net programs which aim to help the poor. The programs cover about 1 million people and make up about 0.4 percent of the GDP.

- *Aide Sociale* for vulnerable groups covers approximately 70,000 physically and visually disabled, orphans, and victims of terrorism<sup>23</sup>. The severely physically severely disabled receive D.A. 2,500 per month,<sup>24</sup> and the sick and visually handicapped receive DA 300 per month. The total cost of the program equals 0.2 percent of GDP.
- *Allocation forfaitaire de solidarité (AFS)*, managed by the ADS, provides financial aid to the handicapped and elderly without income. In principle, those affiliated with the social security system are excluded from this program. The system provides cash transfers (DA 1,000 per month, plus DA 120 per month) for each dependent up to a maximum of three to 420,000 heads of households, or about 840,000 people (including beneficiaries' dependents). In 2000, the system covered 20 percent of the elderly (aged 60 and above) without pensions or other sources of income, and 25 percent of the handicapped (aged 18 and above). Overall, 60 percent of AFS beneficiaries are located in rural areas. A beneficiary study found that the typical elderly beneficiary is female and living alone, and that the typical handicapped beneficiary is a child living with his/her family. The total cost of the program also equals about 0.2 percent of GDP.

74. Although these programs use self-evident criteria, their targeting should be strengthened and their impact on poverty needs to be evaluated. A better understanding of the characteristics of the neediest groups could help improve program design and targeting. Moreover, more strictly enforcing the eligibility criteria and closer monitoring of program results would help reach those who most in need.

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<sup>21</sup> Until 1996, the program was financed by payroll taxation and managed by the CNAS

<sup>22</sup> Those workers with income of less than DA 15,000 per month receive DA 600 per month, per child, for up to five children. Families with more than five children are eligible for 300 DA per month for each additional child, with no limit on the number of children. For workers with salaries equal to or higher than DA 15,000, each child is entitled to 300 DA, with no limit on the number of children. Based on the number of children benefiting from the program, the total unit cost of family allowances is about 7,000 DA per year and per child, or about 550 DA per month. .

<sup>23</sup> *Aide Sociale* is provided in several ways: specialized institutes for needy children and orphans; centers for elderly; and assistance in providing adoption services, including Kefla (which places illegitimate children). Foster families receive state allowances that vary between DA 1,300 per month for assisted orphans; and DA 1,600 per month for disabled orphans. Children with no family and staying in the specialized institutes receive DA 2,500 per month.

<sup>24</sup> This benefit is different from the 1,000 DA per month paid in the safety net program (AFS) which is targeted to those less severely handicapped.

75. Inadequate monitoring and administrative coordination among services under the MTPSFP and between ministries (e.g., Labor, Solidarity, Education, Health) for allocating the transfers to the poor has led to leakages and overlaps between the programs. Currently, some families receive aid from several programs, while needier families may not receive any transfers at all. This is a major issue given that resources are limited. According to a recent beneficiary study of the AFS, about 60 percent of beneficiaries do not meet the eligibility criteria because they have other sources of income (i.e., pension, transfers in kind or in cash, and unspecified resources).

***Assistance programs managed by the Ministry of National Solidarity (MSN)***

76. The MSN is a small player in providing in-kind and/or cash transfers to the poor, however it does complement other assistance programs. It was created in 1996 (and reorganized in 2000) in order to manage programs for reducing poverty and exclusion. Its activities include: (i) promotion of women; (ii) protection and development of poor children; (iii) assistance to people with difficulties including the elderly and disabled; and (iv) assistance to needy and unemployed youth. MSN provides various benefits to the poor such as: housing subsidy, micro-enterprise subsidy, temporary food aid during Ramadan, financial aid, health care cards for those severely sick who are not affiliated to the social security system, small equipment for productive family programs (i.e., sewing machines), in-kind education subsidy (i.e., school canteens, materials, transportation, summer camps), in-kind donations to the severely disabled (e.g., wheelchairs), and in-kind assistance to victims of terrorism. The annual expenditure of these programs is very small (about 0.01 percent of GDP), and 80 percent is financed by solidarity contributions, mostly earmarked taxes, such as solidarity consumption taxes and receipts from automobile taxes, some private contributions; only 18 percent is financed by the general budget.

77. It is difficult to estimate the number of beneficiaries of the MSN programs because activities are often changing, depending on funding, and tend to be ad hoc. The programs are targeted towards the needy and victims of terrorism with no (or low, less than DA 5,000 per month) income, with many children (housing subsidy). Though some activities reach only a few thousand beneficiaries (some housing and micro-enterprise programs), others can be quite large, such as during the month of Ramadan when more than 650 temporary restaurants are opened). Based on preliminary estimates, the number of beneficiaries of these programs is about 1.6 million people in 2000, mainly benefiting from education subsidies (school busing, food aid and school supplies).

78. Distribution of these benefits often is arbitrary due to unclear eligibility criteria and weak reporting and financial controls. In practice local committees receive block grants for specific activities and they are responsible for identifying the beneficiaries and distributing the benefits. For example, the housing subsidy (DA 100,000 to DA 200,000 per beneficiary) is means-tested (families with little no income with several children) but the identification of the beneficiaries takes place at the commune level. Verification procedures for beneficiary eligibility should be strengthened. Currently, local authorities and NGOs monitor the system in the field, but there is no reporting from the local level on the number and characteristics of the beneficiaries nor on the use of these funds.

79. All MSN's programs are targeted to low-income groups, particularly to victims of terrorism, and some overlap exists with programs of other agencies, however, there is no monitoring system in place to assess their impact on poverty. In October 2000, at the initiation of the President, MSN organized the first national conference on poverty and exclusion reduction and gathered all sectoral ministries involved in the social sectors. The Ministry is well aware that there is need for a better understanding of the socio-economic characteristics of the poor, developing a database on the characteristics of the beneficiaries, adapting the legal instruments to promote involvement of the civil society, and developing communication mechanisms for creating awareness of existing programs for those who are in need.

80. As a result of the increasing responsibilities of the programs, the number of MSN administrative staff has grown.. There are about 150 staff in the Ministry, all at the central level, while most of the programs are implemented at the local level. Since the Ministry is not present at the regional level, the

social services offices of the Ministry of Employment and Social Protection (*Direction d'Action Sociale – DAS*) at the wilaya level are used for monitoring and implementing MSN's programs. Although the number of beneficiaries has leveled out at about 1.5 million people, the administrative staff increased almost ten-fold since 1994. The central Government budget finances MSN's wage bill.

### D.3 Policy Implications for Social Assistance Programs

81. Budgetary spending for social assistance programs could remain around 1 percent of GDP, excluding family allowances that are paid by employers and pensions to war veterans. International experience shows that "safety nets," a combination of cash and in-kind transfers with public works programs, have been successful instruments in protecting the vulnerable and the poor. In Algeria, the major challenge is to improve the effectiveness of the assistance programs through: (i) better targeting mechanisms; (ii) stronger institutional capacity at the local level; and (iii) coordination across line ministries. Potential interventions to achieve these goals are outlined below:

#### Box 6: Definition of various types of vulnerable groups

**Chronic Poverty Group.** This group is vulnerable to the adverse outcomes of micro and macroeconomic shocks. This vulnerability is linked to poor endowments (assets), reflecting a basic overall resource constraint. It overlaps with the notion of chronic (extreme) poverty. The policy mix to respond to the needs of this group will probably weigh general investments in assets (education, health, transport, services) very heavily. Pure transfers, however, may also be necessary in order to ease suffering and prevent irreversible adverse outcomes of chronic poverty and shocks –(e.g., conditional transfers to encourage school attendance/better learning, such as, cash- or food-for schooling programs). Targeting mechanisms most suited to this group would include: (i) targeting by indicators (e.g., proxy means or geographic targeting) based on assets and their correlation to consumption / income; and (ii) self-targeting by type and location of investment (e.g., village-level potable water connections).

**Transient Poverty Group.** This group lives near the poverty line, and may be vulnerable either because they are exposed to large shocks or because their coping/risk management mechanisms are weak, possibly due to repeated shocks. This could include lower income urban residents and formal sector workers who are vulnerable to macroeconomic shocks. It is also the hardest group to "measure" due to data limitations. Policy responses for this group will likely include the promotion of better access to market- or public-insurance mechanisms, continued investments (e.g., education) to help build their assets, and some (conditional) transfers. Promoting financial services may also help people in this group to better manage their risks and build their assets. Targeting by indicators or proxy means testing is difficult because the "proxies" (usually assets) are static –(i.e., someone may have adequate housing but no cash flow due to a lost job).

**Special Circumstances Groups.** Some sub-groups of the population are also at risk due to special circumstances. These could be related to past shocks that have put them in a particularly vulnerable position –(e.g., displaced populations during civil unrest). In other cases, vulnerability arises from "social pathological factors" such as societal behavior (e.g., street children, drug addicts, victims of domestic violence, victims of discrimination, orphans, etc. ). In other cases, vulnerability comes from disability (e.g., the handicapped). Finally, certain features of the lives of some sub-groups make them particularly vulnerable for a variety of reasons, such as undocumented workers, poor elderly, temporary migrant workers, etc. The policy responses and targeting mechanisms will depend on the nature of these specific circumstances (and their location for geographic targeting). Clearly, there can be overlaps between the groups (e.g., between the first and third groups).

#### Short-term interventions

- *Define vulnerable groups to assess the efficiency and adequacy of existing SP programs.* There is no single method for defining vulnerability -- particularly when data are limited -- but a conceptual definition should consider three dimensions: (i) exposure to risks; (ii) inability to manage (cope with) these risks; and (iii) exposure to the adverse outcomes resulting from exogenous shocks (Box 6). It is important to describe the notion of vulnerability in Algeria using available data, then use that classification to identify an appropriate policy mix and targeting tools. Criteria should be objective so that small groups with strong political power do not divert attention from groups with no political voice (e.g., street children, women). The typology of beneficiaries can then be used to review the current program objectives, and the demographic and socioeconomic criteria can be used to determine whether a particular individual has access to a given program. This is particularly urgent in the case of the AFS program.

- *Develop an information base to geographically locate targeted population groups.* Once groups at risk have been identified (e.g., extreme poor, children, elderly, unemployed), a map of their regional distribution should be prepared. This is a prerequisite for applying an adequate and transparent targeting mechanism. Based on the 2000 household survey, the socioeconomic and demographic characteristics of poor/vulnerable groups, their number and geographic distribution should be identified. Monitoring indicators could be defined and an information system set in place to keep track of beneficiaries and impact evaluation for future programs.
- *Containing costs of the family allowances.* Since family allowances are paid by the employer, options to contain/reduce their costs should be considered (e.g., fixing the maximum number of children per eligible family to two) to reduce their impact on labor cost.

### Medium-term interventions

- *Phasing-out family allowances and introducing transfer programs targeted to poor families with children.* In addition to AFS, which provides financial support to poor families headed by elderly or handicapped, the Government could consider introducing targeted child benefits to vulnerable families (mainly in rural and peri-urban areas) irrespective of the employment status of the head of the household. The introduction of such a scheme requires detailed estimations of potential beneficiaries as well as costs.
- *Improving targeting mechanisms in the allocation of resources by balancing centralized and decentralized arrangements and improving the Governance at local levels.* Once those who need to be helped have been regionally mapped, mechanisms to allocate resources are then necessary. Central and local efforts need to be coordinated in order to minimize the leakage of resources. An adequate monitoring system needs to be implemented to ensure that the poor benefit from the programs. International experience suggests that the central government should have the responsibility of allocating resources across regions. Local government should then use community-based approaches or self-targeting methods to distribute resources to beneficiaries. It is generally recommended that resources be allocated in proportion to the share of poor population, children, women and elderly in each wilaya. This system maximizes the probability that targeted individuals will actually receive the transfers. At the local level, in the case of cash and in-kind transfers, communities should be a key component of the distribution process. Local governments, however, should have the responsibility to monitor allocations on a random basis using, for instance, meanstested methods. *Cellules de proximités* could be an effective mechanism to involve communities in this process. In the case of public work programs, self-targeting methods are the most efficient and could be reinforced.
- *Improve coordination across government programs and agencies.* Since safety-net programs in Algeria are often managed by different line ministries and central government agencies, there is an urgent need for improved coordination, particularly between programs managed by the Ministry of Labor and Social Protection and the Ministry of National Solidarity (MCNS). While decentralized implementation is a desirable outcome, the monitoring of programs should be centralized. In the context of poverty reduction strategy, it is also necessary to clarify the role of the MCNS in respect to other ministries (Education, Health, Agriculture, Interior, Labor and Social Protection) to ensure coordination among programs. Given its success in the field and lessons learned in community driven activities, the ADS would be a good choice for undertaking this task. To this end, however, its institutional capacity should be strengthened. By putting in place an effective monitoring system, the ADS is already trying to improve the management of the safety net programs – including AFS - through the computerization of beneficiary lists at the wilaya level and training of technical supervisors in collecting information on the beneficiaries.

**Democratic and Popular Republic of Algeria**  
**Public Expenditure Review in the Social Sectors**

**Statistical Annexes**

## Annex A: Macroeconomic Framework

Algeria – Selected Indicators Table

*Base-case (most likely) projection*

	<i>Actual</i>			<i>Estimate</i>		<i>Projection</i>		
	1996	1997	1998	1999	2000	2001	2002	2003
<b>Part A: Main Macro Aggregates</b>								
<i>Annual growth rates, calculated from constant 1980 price data</i>								
GDP (mp) per capita ('000)	2.0	-0.6	3.5	1.8	1.6	3.8	2.1	3.3
Total consumption per capita	0.4	-1.4	0.9	1.2	0.7	6.0	2.7	3.4
GDP at market prices	3.8	1.1	5.1	3.3	3.5	5.7	3.8	5.1
Total consumption	2.2	0.3	2.5	2.8	2.7	7.9	4.5	5.2
Private consumption	2.0	-1.0	2.4	2.9	1.7	6.8	5.0	5.5
Gross domestic investment (GDI)	3.5	0.8	3.3	2.7	3.0	3.5	3.3	3.2
Gross dom. fixed investment (GDFI)	..	..	..	..	..	..	..	..
Exports (GNFS)	7.1	6.3	1.6	6.2	6.3	3.0	4.1	7.5
of which Goods	7.4	4.6	1.6	6.2	6.5	3.0	4.1	7.7
Imports (GNFS)	-13.3	2.4	6.5	1.8	3.5	6.5	5.2	6.0
of which Goods	-5.9	-10.6	15.6	1.4	5.2	5.5	5.1	5.6
<i>Savings-investment balances, as percentage of GDP</i>								
Gross Domestic investment	25.1	23.8	27.7	27.4	27.1	26.9	26.9	26.4
of which Government investment	6.8	7.3	7.6	5.9	8.1	8.1	8.0	7.8
Foreign savings	-2.7	-7.2	1.9	0.0	-16.2	-3.5	-1.2	-0.8
Gross national savings	27.8	31.0	25.8	27.4	43.3	30.4	28.0	27.2
Government savings	10.7	10.2	4.0	5.5	9.1	8.9	8.8	9.9
Non government savings	17.1	20.8	21.8	21.9	34.2	21.5	19.3	17.3
Gross domestic savings	31.4	32.2	27.1	31.7	46.7	32.1	29.6	29.0
<i>Other</i>								
GDP inflation	25.7	6.5	-4.1	10.9	20.0	-5.0	3.0	3.5
Annual average exchange rate (LCU/US\$)	54.7	57.7	58.7	66.5	74.6	73.0	74.0	75.0
Index real average exchange rate (YR80 =100)	39.8	43.8	45.9	42.2	45.4	44.7	45.6	45.9
Terms of trade index (YR80 =100)	107.1	107.1	84.2	94.0	155.3	101.9	93.4	91.1
Incremental capital-output ratio (GDI based)	5.3	18.4	4.0	6.0	5.5	3.5	5.0	3.7
Import elasticity with respect to GDP	-155.6	-959.2	305.2	41.0	146.3	96.6	133.1	110.0
Money growth	14.4	18.2	19.1	14.0	15.8	9.6	7.2	9.0

### Part B: Government Finance Indicators

*Percentage of GDP*

Algeria - Selected Indicators Table

Base case (most likely) projection

	Actual			Estimate		Projection		
	1996	1997	1998	1999	2000	2001	2002	2003
Total revenues, of which	32.2	33.6	27.8	29.8	30.5	29.7	29.2	29.8
Tax revenues	31.6	32.8	27.2	28.3	27.6	26.9	26.4	26.8
Total expenditures, of which	29.2	31.2	31.7	30.3	29.5	28.8	28.5	27.7
Consumption	10.0	10.5	11.4	10.7	8.4	11.3	11.4	11.3
Deficit(-)/Surplus(+)	2.9	2.4	-3.9	-0.5	0.9	0.8	0.8	2.1
Financing:	1.5	0.9	-1.6	0.4	-0.9	-0.8	-0.8	-2.1
Foreign	4.1	2.3	-0.3	-2.3	-6.8	-1.7	-2.1	-1.7
Monetary sector	-2.3	-0.6	-2.0	1.9	1.9	-0.1	2.8	2.2
Other domestic	-0.3	-0.8	0.7	0.8	4.0	1.0	-1.5	-2.7
<i>Other</i>								
Total Debt/GDPmp	86.2	82.7	85.9	58.4	44.2	39.0	32.3	25.9
Total interest payments/Tax revenues	11.0	12.1	14.7	14.0	15.8	14.0	13.2	11.1

Part C: Debt & Liquidity Indicators

Total DOD and TDS

DOD (US\$ millions)	33420.8	30889.8	30665.4	29380.7	23483.9	21247.4	18531.1	15996.4
DOD / GDPmp ratio	71.3	64.6	64.7	61.3	44.2	39.0	32.3	25.9
TDS (US\$ millions)	4172.5	4420.5	5135.6	5381.0	5233.7	4540.0	4197.6	3861.5
TDS / exports (XGS) ratio	29.4	29.2	45.6	40.6	22.2	26.0	24.2	20.9
Total gross reserves (months' imports G&S)	3.9	7.8	6.5	4.0	7.7	8.7	8.5	8.2

Part D: External Financing Plan

(US\$, millions)

Official capital grants	0.0	0.0	0.0	0.0	80.0	120.0	100.0	150.0
Private investment (net)	270.0	260.0	500.0	460.0	660.0	1850.0	2500.0	2340.0
Net Long term borrowing excl IMF	-3400.0	-2510.0	-1330.0	-1960.0	-4430.1	-2084.5	-2402.3	-2113.7
Adjustments to scheduled debt service	4470.0	3020.0	650.0	80.0	0.0	0.0	0.0	0.0
All other capital flows	-210.0	-40.0	0.0	-950.0	0.0	0.0	0.0	0.0
Financing Requirements (incl IMF)	1130.0	730.0	-180.0	-2370.0	-3690.1	-114.5	197.7	376.3
of which current account deficit	-1250.0	-3450.0	910.0	-20.0	-8595.1	-1921.2	-662.3	-512.3

## Annex B: Statistics Education Sector

### Table B1: Demographic Projections

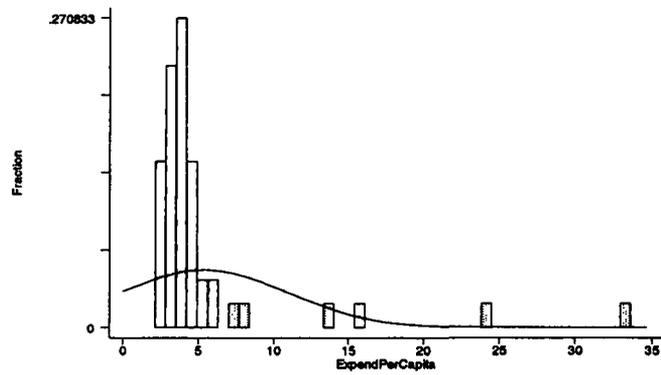
AGE	2000	2025	2050	2075
<hr/>				
<b>TOTAL MALE AND FEMALES</b>	30399	44328	53831	57486
<b>MALES</b>				
0-4	1922	1857	1844	1848
5-9	1884	1805	1833	1847
10-14	1789	1796	1837	1850
15-19	1743	1853	1848	1850
20-24	1567	1818	1848	1839
25-29	1343	1874	1826	1821
30-34	1151	1839	1772	1805
35-39	1014	1738	1756	1800
40-44	760	1683	1801	1801
45-49	640	1497	1751	1787
50-54	460	1259	1775	1741
55-59	302	1045	1692	1647
60-64	272	871	1525	1567
65-69	229	598	1367	1506
70-74	162	436	1074	1315
75+	154	406	1325	2316
<b>TOTAL</b>	15390	22375	26874	28342
<b>FEMALES</b>				
0-4	1,847	1,780	1,762	1,762
5-9	1,812	1,734	1,754	1,762
10-14	1,719	1,728	1,760	1,766
15-19	1,676	1,788	1,774	1,769
20-24	1,513	1,760	1,780	1,764
25-29	1,274	1,817	1,765	1,753
30-34	1,123	1,786	1,720	1,744
35-39	998	1,688	1,709	1,746
40-44	735	1,637	1,761	1,755
45-49	598	1,465	1,723	1,753
50-54	452	1,216	1,760	1,725
55-59	323	1,050	1,701	1,661
60-64	301	902	1,567	1,622
65-69	266	626	1,457	1,627
70-74	186	460	1,212	1,518
75+	187	516	1,751	3,417
<b>TOTAL</b>	150,09	219,53	269,57	291,44

**Table B2: Regional distribution of expenditures and basic education indicators**

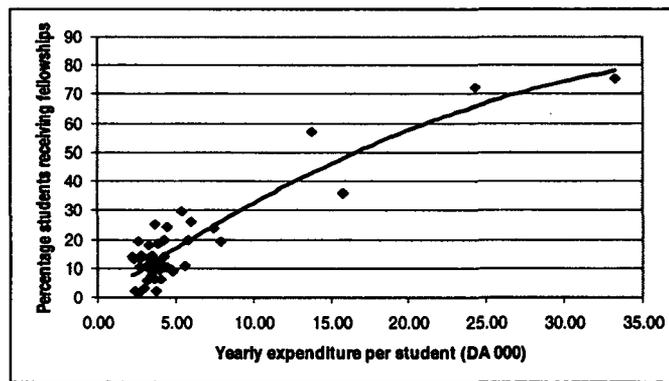
Wilaya	Expenditure per Capita (DA 000)	Enrollment rate	Promotion rate from grade 6 to 7	Promotion rate from grade 9 to 10	Bac success rate	Share of student with fellowships in primary education	Girls participation rate in primary education
ADRAR	13.79	97.48	56.33	40.09	21.06	57.37	45.43
CHLEF	3.23	97.96	54.1	47.23	24.06	13.71	45.83
LAGHOuat	5.40	97.95	75.03	40.3	15.58	29.73	46.87
O.E. BOUAGHI	3.81	98.60	65.5	42.92	23.2	10.92	46.27
BATNA	3.30	98.62	62.53	41.43	23.33	18.13	46.5
BEJAIA	2.29	99.67	70.56	44.94	30.48	13.27	47.42
BISKRA	3.81	99.36	69.65	41.64	31.68	18.32	46.55
BECHAR	7.39	98.30	54.11	39.11	18.19	23.74	47.55
BLIDA	2.94	100.00	70.13	42.39	22.09	3.24	47.37
BOUIRA	3.48	96.91	59.33	41.97	26.56	12.98	47.33
TAMANRASSET	15.78	99.15	61.93	38.15	7.67	35.96	43.66
TEBESSA	3.68	99.38	66.06	43.1	18.72	6.38	45.44
TLEMCEN	3.51	97.78	71.35	54.31	32.22	14.25	47.46
TIARET	3.92	99.39	54.47	47.48	28.15	9.55	46.55
TIZI-OUZOU	2.63	97.75	70.78	46.96	30.34	19.43	47.49
ALGER	2.56	100.00	77.51	50.76	28.09	1.53	47.48
DJELFA	3.21	97.81	63.4	47.31	13.75	6.04	46.11
JUEL	4.00	99.46	59.31	35.75	23.43	6.44	47.09
SETIF	2.73	98.42	75.47	36.38	21.53	13.11	47.16
SAIDA	5.53	98.09	72.56	53.32	25.64	10.81	46.56
SKIKDA	2.24	99.11	60.98	39.32	25.69	13.97	46.77
S.B. ABBES	4.27	98.19	65.95	45.83	23.35	19.62	47.05
ANNABA	3.59	99.61	69.49	47.17	27.16	11.79	47.17
GUELMA	3.78	98.55	68.26	47.2	24.45	11.94	46.74
CONSTANTINE	3.36	98.57	65.47	48.24	22.37	9.24	47.92
MEDEA	3.26	98.11	65.39	41.86	21.24	10.28	47.28
MOSTAGANEM	3.88	98.31	70.92	46.3	29.56	9.95	45.73
M'SILA	2.88	97.17	57.66	41.29	17.49	13.92	46.27
MASCARA	3.70	100.30	74.6	45.41	32.48	9.93	47.04
OUARGLA	4.41	99.87	67.52	43.57	24.34	10.53	46.91
ORAN	2.37	100.53	71.42	48.93	31.32	2.35	47.57
EL-BAYADH	7.93	97.52	66.41	60.71	25.93	19.3	44.88
ILLIZI	33.26	98.84	53.61	29.54	12.06	75.63	43.22
B.B. ARRERRIDJ	2.81	98.59	67.62	43.75	20.88	14.48	47.09
BOUMERDES	3.76	99.97	54.12	35.1	24.05	2.37	46.64
EL-TARF	4.07	100.37	64.95	36.04	17	13.01	47.05
TINDOUF	24.31	97.13	64.08	51.14	8.94	72.31	48.07
TISSEMSILT	5.74	98.59	59.97	41.45	23.41	19.61	44.94
EL-OUED	4.45	99.50	76.16	47.66	27.28	24.4	47.23
KHENCHELA	3.68	97.28	68.32	38.95	20.14	25.2	45.86
SOUK-AHRAS	4.28	97.17	71.28	38.39	22.68	13.78	45.98
TIPAZA	4.24	100.00	64.02	41.21	27.09	10.49	46.85
MILA	2.74	99.35	63.91	44.71	26.73	10.56	46.8
AIN-DEFLA	3.19	100.00	62.03	44.82	16.95	10.97	45.88
NAAMA	5.93	98.78	61.56	52.05	19.45	26.28	45.59
AIN-TEMOUCHENT	4.72	98.10	60.36	44.77	36.74	9.33	47.74
GHARDAIA	4.77	99.41	63.54	51.09	25.31	8.91	40.81
RELIZANE	3.48	99.35	61.91	..	33.93	7.78	46.05

Source: Ministry of National Education.

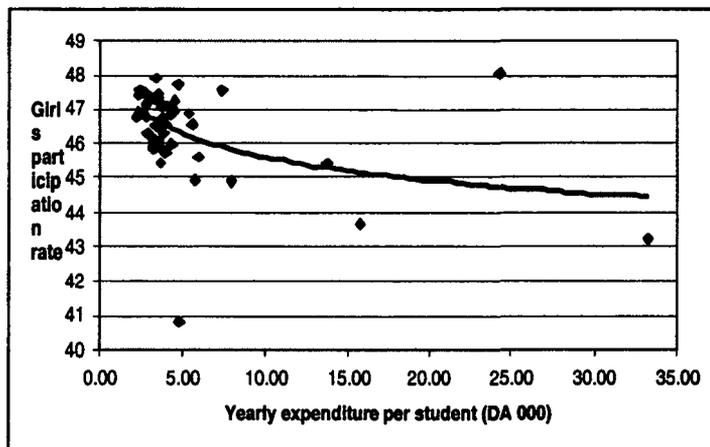
**Figure B1. There are considerable variations in the distribution of expenditures across wilayas...**



**Figure B2. But allocations seem to be favoring low income regions...**



**Figure B3. With poor education indicators**



## Annex C: Statistics Health Sector

**Table C1. Recurrent Budget by Wilaya, 2001**

Wilaya	Population (1998)	Recurrent Budget, 2001 (Dinar millions)	
		Absolute Amount (millions)	Amount per Capita
1 Adrar	313,417	709	2,261
2 Chlef	874,917	855	977
3 Laghouat	326,862	517	1,582
4 Oum el Bouaghi	529,540	822	1,552
5 Batna	987,475	1,187	1,202
6 Bejaia	836,301	1,057	1,264
7 Biskra	568,701	866	1,523
8 Bechar	232,012	771	3,323
9 Blida	796,616	1,143	1,435
10 Bouira	637,042	730	1,146
11 Tamenrasset	138,704	421	3,035
12 Tebessa	565,125	901	1,594
13 Tlemcen	873,039	964	1,104
14 Tiaret	770,194	976	1,267
15 Tizi Ouzou	1,100,297	1,343	1,221
16 Alger	2,423,694	6,576	2,713
17 Djelfa	805,298	736	914
18 Jijel	582,865	735	1,261
19 Setif	1,299,116	1,122	864
20 Saida	313,351	436	1,391
21 Skikda	793,146	1,030	1,299
22 Sidi Bel Abbes	535,634	674	1,258
23 Annaba	559,898	771	1,377
24 Guelma	444,231	646	1,454
25 Constantine	807,371	1,504	1,863
26 Médéa	859,273	941	1,095
27 Mostaghanem	636,884	811	1,273
28 M'sila	835,701	903	1,081
29 Mascara	651,239	1,128	1,732
30 Ouargla	443,683	810	1,826
31 Oran	1,208,171	1,527	1,264
32 El Bayadh	172,957	378	2,186
33 Illizi	34,189	265	7,751
34 Bordj Bou Arreridj	561,471	553	985
35 Boumerdes	608,806	747	1,227
36 El Tarf	350,789	598	1,705
37 Tindouf	27,053	127	4,694
38 Tissemsilt	274,380	346	1,261
39 El Oued	525,083	636	1,211
40 Khenchela	345,009	605	1,754
41 Souk Ahras	365,106	526	1,441
42 Tipaza	507,959	1,052	2,071
43 Mila	663,578	754	1,136
44 Ain Defla	658,897	714	1,084
45 Naama	131,846	311	2,359
46 Ain Témouchent	337,570	627	1,857
47 Ghardaia	311,678	636	2,041
48 Relizane	646,175	683	1,057
<b>Total</b>	<b>29,272,343</b>	<b>43,170</b>	<b>1,475</b>

**Table C2. Recurrent Health Budget by Region, 2001**

<b>Region</b>	<b>Population (1998)</b>	<b>Recurrent Budget, 2001</b>	
		<b>Absolute Amount (millions)</b>	<b>Amount per Capita</b>
Center	9,795,654	15,592	1,592
East	9,128,950	12,104	1,326
West	7,121,554	9,027	1,268
Southeast	2,348,900	4,151	1,767
Southwest	877,285	2,296	2,617
<b>Total</b>	<b>29,272,343</b>	<b>43,170</b>	<b>1,475</b>

**Table C3. Recurrent Budget by Category, 2001**

**Dépenses de Santé Publique de l'Etat**  
(en 000 de DZD courants)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>DEPENSES DE L'ETAT</b>												
<b>1 Dépenses totales de Fonction. Ministère de la Santé</b>												
1.1 <i>Dépenses de fonction. des établis. publics de soins</i>	13,058,010	20,079,650	24,975,300	26,331,800	30,483,492	36,697,280	43,250,787	47,129,000	49,609,880	53,630,880	54,809,885	58,994,030
1.1.1 Personnel	9,720,368	15,367,000	18,774,100	19,431,800	21,503,492	26,585,000	28,562,500	31,519,500	33,919,880	36,312,880	37,185,680	38,664,161
1.1.2 Formation	729,706	808,180	881,900	830,000	910,000	1,143,000	1,360,000	1,252,000	1,327,000	1,338,500	1,327,259	1,396,609
1.1.3 Alimentation	456,181	589,090	600,000	600,000	700,000	900,000	893,000	893,000	893,000	937,500	1,024,387	1,055,118
1.1.4 Médicaments	801,755	1,690,000	2,671,300	3,000,000	4,057,000	4,285,280	6,798,000	7,408,000	7,405,000	9,015,000	8,015,000	9,415,000
1.1.5 Prévention	250,000	245,380	230,000	300,000	470,000	500,000	1,161,000	1,161,000	1,161,000	1,161,000	1,161,000	1,361,000
1.1.6 Matériel médical	300,000	355,000	400,000	500,000	823,000	600,000	1,177,087	1,558,300	1,660,000	1,508,000	1,883,247	2,329,329
1.1.7 Entretien	300,000	240,000	240,000	300,000	450,000	600,000	800,000	800,000	800,000	800,000	1,161,435	1,419,507
1.1.8 Oeuvres sociales				370,000	370,000	384,000	460,000	523,000	523,000	609,000	705,000	744,220
1.1.9 Autres	500,000	785,000	1,178,000	1,000,000	1,200,000	1,700,000	2,039,200	2,014,200	1,921,000	1,949,000	2,346,877	2,609,086
1.2 <i>Dépenses de fonctionnement administration de la santé</i>												
<b>2 Dépenses totales d'investissement réalisé</b>												
<b>DEPENSES DE L'ETAT</b>												
<b>1 Dépenses totales de Fonction. Ministère de la Santé</b>												
1.1.1 Personnel	74%	77%	75%	74%	71%	72%	66%	67%	68%	68%	68%	66%
1.1.2 Formation	6%	4%	4%	3%	3%	3%	3%	3%	3%	2%	2%	2%
1.1.3 Alimentation	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
1.1.4 Médicaments	6%	8%	11%	11%	13%	12%	16%	16%	15%	17%	17%	16%
1.1.5 Prévention	2%	1%	1%	1%	2%	1%	3%	2%	2%	2%	2%	2%
1.1.6 Matériel médical	2%	2%	2%	2%	3%	2%	3%	3%	3%	3%	3%	4%
1.1.7 Entretien	2%	1%	1%	1%	1%	2%	2%	2%	2%	1%	1%	2%
1.1.8 Oeuvres sociales	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
1.1.9 Autres	4%	4%	5%	4%	4%	5%	5%	4%	4%	4%	4%	4%

**Table C4. Provider Payment Mechanisms and Incentives for Provider Behavior**

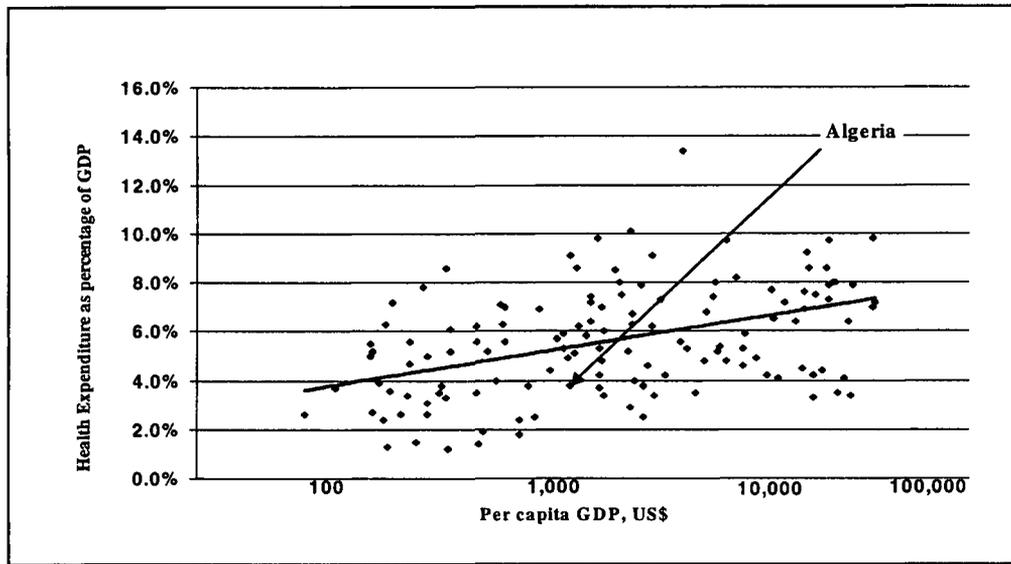
Mechanisms	Provider Behavior		
	Prevention	Delivery	Cost Containment
Line item budget	+/-	--	+++
Global budget	++	--	+++
Capitation (with competition)	+++	--	+++
Diagnostic related payment	+/-	++	++
Fee-for-service	+/-	+++	---

Incentives:

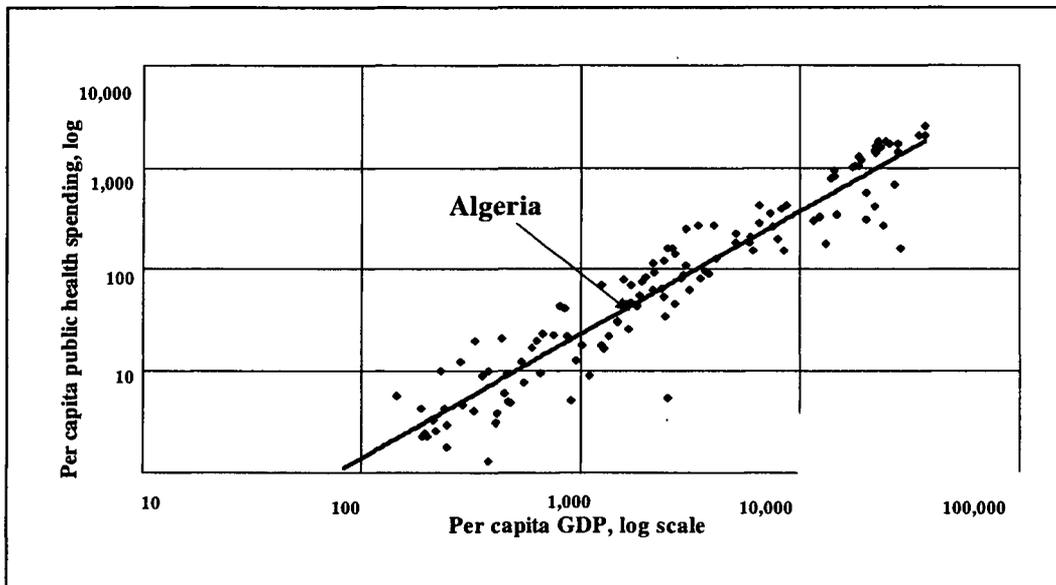
- Highly negative
- Negative
- +/- Ambiguous
- ++ Positive
- +++ Highly positive

Source: World Health Report, 2000.

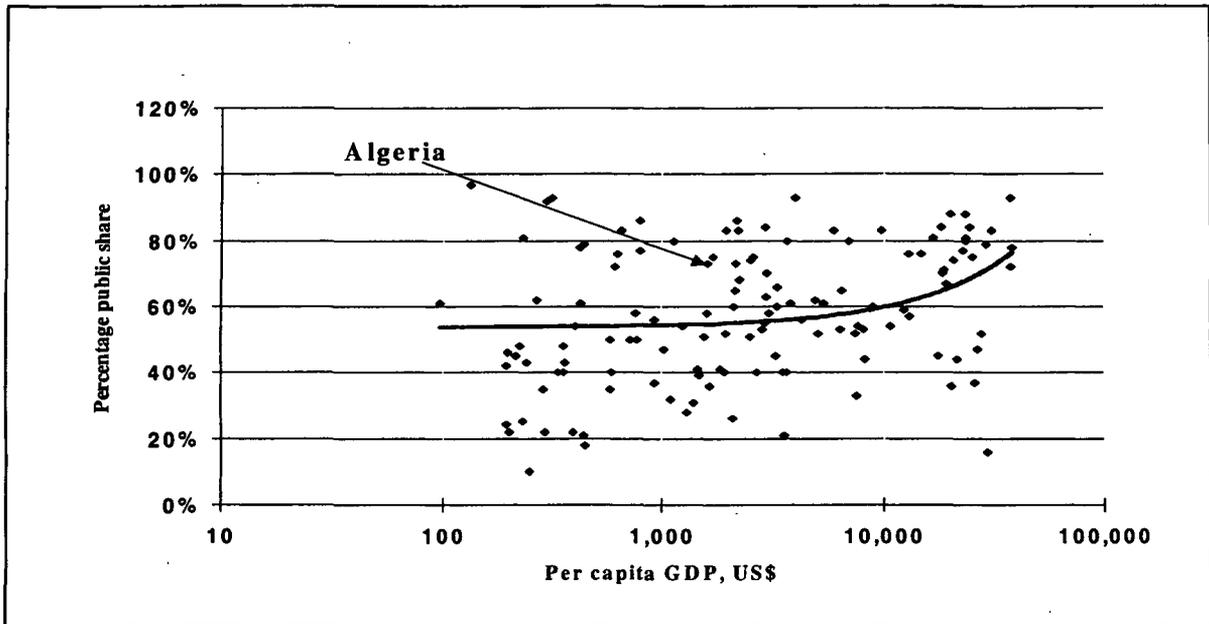
**Figure C1: Health Expenditures are Low Compared to GDP Per Capita**



**Figure C2: Per Capita *Public* Health Spending is Average for Algeria's Income Level**



**Figure C3: Public Spending as Share of Total Health Spending is Well Above Average for Algeria's Income Level**



Sources for Figure C1-C3: World Bank Estimates, 2001

## Annex D: Statistics Social Protection Sector

**Table D1: Employment Programs  
(in million DA)**

	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Wage Subsidies</b>	1,500	2,000	2,200	2,550	2,500	2,600	2,758	2,980	1,964
ESIL	-	-	-	-	-	2,600	2,300	2,400	1,900
CPE	-	-	-	-	-	-	458	580	64
<b>A. Public Works</b>	-	8,437	7,294	4,614	4,043	5,251	6,278	6,247	5,141
IAIG	-	8,437	7,294	4,614	4,043	4,256	4,643	4,656	4,570
TUP-HIMO	-	-	-	-	-	995	1,635	1,591	571
<b>Micro-Finance</b>	-	-	-	-	-	3,000	3,000	4,000	5,000
ANSEJ	-	-	-	-	-	3,000	3,000	3,000	4,000
Micro-credit (ADS)	-	-	-	-	-	-	-	1,000	1,000
<b>Job placement (ANEM)</b>	-	-	-	-	-	-	-	-	500
<b>Training programs</b>	3,129	3,492	4,229	4,547	5,721	5,329	6,680	7,439	8,038
<b>Total employment programs</b>	4,629	13,929	13,723	11,711	12,264	16,180	18,716	20,666	20,643

**Table D2: Beneficiaries of Employment Programs**

	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Wage Subsidies</b>	32,360	40,888	57,791	70,793	69,036	86,100	78,340	79,857	56,052
ESIL	32,360	40,888	57,791	70,793	69,036	86,100	72,200	68,300	55,100
CPE	0	0	0	0	0	0	6140	11557	952
<b>Public Works</b>	0	0	0	0	314904	138767	140571	144263	137347
IAIG	0	0	0	0	314904	133767	134571	136263	132347
TUP-HIMO	0	0	0	0	0	5000	6000	8000	5000
<b>Micro-Finance</b>	15,789	8,947	5,922	9,405	18,551	3,000	23,942	39,560	28,735
ANSEJ	15,789	8,947	5,922	9,405	18,551	3,000	23,942	39,260	28,735
Micro-credit (ADS)	-	-	-	-	-	-	-	300	-
<b>Job placement (ANEM)</b>	15000	15000	15000	15000	16000	18000	20000	23000	26000
<b>Training programs</b>	228414	226421	242905	241143	251347	253874	264377	269625	380000
<b>Total employment programs</b>	291,563	291,256	321,618	336,341	669,838	499,741	527,230	556,305	628,134

**Table D3: Social Assistance Programs  
(Million DA)**

	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>B. Family allowances</b>	2,300	2,441	9,790	24,714	36,036	44,681	42,568	36,616	31,146
<b>Cash and in kind transfers</b>	60,068	41,137	48,615	54,928	53,881	56,542	67,415	80,450	75,432
<i>Blind</i>	11	29	63	83	89	127	132	137	137
<i>Blind social protection</i>	248	246	289	272	270	268	262	305	607
<i>Elderly</i>	30	30	40	37	47	211	107	125	140
<i>Children</i>	21	21	27	29	51	52	54	59	62
<i>Handicap</i>	-	-	260	447	857	1,109	868	956	1,963
<i>Victims terrorism</i>	-	-	60	1,000	1,000	3,200	4,500	4,500	5,000
<i>Transfers to Moujahedines</i>	6,424	10,848	10,820	27,349	32,710	43,181	52,548	65,794	58,893
<i>Cures</i>	-	32	71	104	88	89	86	93	93
<i>Pensions</i>	6,424	10,816	10,749	27,245	32,622	43,092	52,462	61,701	50,800
<i>Pension complement</i>	-	-	-	-	-	-	-	4,000	8,000
<i>AFS transfers</i>	-	15,563	13,456	8,511	7,457	7,644	8,757	8,344	8,430
<i>Price support funds</i>	53,334	14,400	23,600	17,200	11,400	-	-	-	-
<i>South transport compensation fund</i>	-	-	-	-	-	750	187	230	200
<b>Other</b>	4,537	5,721	6,207	6,022	7,080	7,491	8,498	8,903	10,239
<i>Oeuvres sociales</i>	1,400	1,641	2,257	2,728	3,379	4,335	4,724	4,894	5,984
<i>Bonus agriculture</i>	407	700	800	792	1,150	450	1,150	1,150	1,300
<i>Contributions to solidarity funds</i>	-	-	-	-	-	-	50	100	-
<i>IPSU functionaries</i>	1,800	2,000	1,608	559	376	340	259	234	211
<i>Contributions to associations</i>	290	348	580	663	620	713	509	601	533
<i>Contributions to social protection org.</i>	640	1,032	962	1,280	1,555	1,653	1,806	1,924	2,211
<b>Ministry of National Solidarity</b>	-	-	-	181	400	941	1,238	892	190
<b>Total Assistance Programs</b>	66,905	49,299	64,612	85,845	97,397	109,655	119,719	126,861	117,007

**Table D4: Beneficiaries of Social Assistance Programs**

	1993	1994	1995	1996	1997	1998	1999	2000
Family allowances	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,500,000	4,500,000	4,500,000
Cash and in kind transfers	0	27,040	40,131	35,214	43,282	64,556	67,601	66,000
<i>AFS transfers</i>	0	0	0	819,683	824,598	820,476	810,561	800,000
		0	0	209,086	1,424,086	2,025,886	1,717,624	1,620,369
							0	0
<b>Total Assistance</b>	<b>4,000,000</b>	<b>4,054,080</b>	<b>4,080,262</b>	<b>5,099,197</b>	<b>6,335,248</b>	<b>7,475,474</b>	<b>7,163,387</b>	<b>7,052,369</b>

**Table D5: CNR and CASNOS recent financial performance**

	1995	1996	1997	1998	1999
GDP (DA billion)	1,975	2,474	2,762	2,782	3,187
Inflation	29.8%	18.6%	5.7%	4.5%	4.2%
Population (000)	29,060	28,566	29,045	29,507	29,950
Population 15-64 (000)	16,055	16,569	17,095	17,626	18,226
Population > 64 (000)	1,002	1,043	1,085	1,127	1,174
Labor force (000)	8,698	8,889	9,376	9,874	10,080
Dependency ratio	6.24%	6.29%	6.34%	6.39%	6.44%
<b>CNR</b>					
Contributors (000)	2,803	2,772	2,742	2,712	2,682
Beneficiaries (000)	502	539	584	639	680
Dependency ratio	33.2%	35.5%	39.1%	42.9%	43.6%
Average taxable wage	90,770	92,500	103,974	135,290	142,385
Average pension	75,337	83,051	95,877	112,324	124,257
Contributions (DA million)	35,620	35,900	39,910	51,360	53,460
Pensions (DA million)	37,840	44,730	56,040	71,750	84,500
Administrative costs (DA million)	890	1,090	1,460	1,730	1,870
Balance (DA million)	(3,110)	(9,920)	(17,590)	(22,120)	(32,910)
Share GDP	-0.16%	-0.40%	-0.64%	-0.80%	-1.03%
<b>CASNOS</b>					
Contributors (000)		255.8	301.4	385.1	350.0
Beneficiaries (000)		72.0	83.4	98.0	105.0
Dependency ratio		28.2%	27.7%	25.5%	30.0%
Average taxable income		54,226	99,960	136,423	172,991
Average pension		33,589	40,006	50,040	57,738
Contributions (DA million)		1,040	2,260	3,940	4,541
Pensions (DA million)		2,420	3,336	4,904	6,060
Administrative costs (DA million)		-	-	-	-
Balance (DA million)		(1,379)	(1,076)	(964)	(1,519)
Share GDP		-0.06%	-0.04%	-0.03%	-0.05%

Notes: a) The average taxable income and the average taxable wage have been inferred from the total contributions, the number of contributors and the contribution rate. In the case of CASNOS given that no information was provided on total contributions to the pension fund, aggregate contributions were used along with the total contribution rate (15%). The 7.5% contribution rate was then applied to the average taxable income computed in this way, to approximate contribution to the pension system. b) In the case of CNR only beneficiaries within the system have been considered.

Source: CNR and CASNOS.